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ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2116

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NEED FOR SOUND SCIENTIFIC BASES IN GEOLOGICAL RESEARCH

Tirana RRUGA E PARTISE in Albanian Nov 80 pp 15-23

[Article by Ramazan Vladi: "Put Scientific Research on More Sound Scientific Bases"]

[Text] In its policy of socialist industrialization, our party has given and gives precedence to the development of geological research and discovery as an essential condition for development, also with precedence and at a rapid pace, of the mining and processing industry. The party's special attention for the geological sector, the great investments made in this sector, the increase in the number of cadres and specialists and in their ability, the continual strengthening of the technical material base and equipping it with machinery, devices and modern equipment, have put our geological service on sound scientific bases. As a result, considerable reserves of such useful mineral ores as chrome, coal, ferronickel and other new ores have been discovered.

The party has clearly defined at its congresses the orientations and paths on the basis of which geological research has developed in our country. By virtue of the effort and struggle which the geological workers, headed by communists, have made to become aware of the geological formations and the potential mineral content of the country, 35 useful minerals are being processed in the sixth 5-year period, of which only five or six were known in the first 5-year period.

These results were achieved in a bitter struggle with internal and external enemies of our country, from the Yugoslav and Soviet revisionists to the Chinese revisionists who, by their hostile activity, tried to sabotage us, to deceive us, to disorient us and to divert us from the right path. They have claimed that our country lacks resources from petroleum and chrome to the bauxites, the polymetals, the phosphorites and other minerals. However, our geologists, enlightened by the teachings of the party and Comrade Enver Hoxha, through their persistent efforts, have made it possible to discover valuable resources of chrome, copper, ferronickel and others precisely in those areas and regions that the foreign specialists had said lacked resources.

During the past few years, geology workers have made a thorough effort to fulfill the important tasks that the Seventh Congress of the Albanian Workers Party laid out for them. Geological activities expanded and strengthened both for the major known minerals and for new minerals, increasing the physical volumes and the variety of study methods.

The results achieved are a good base for moving further ahead securely. But by no means can we be satisfied due to the fact that the field of geological research is very broad and much still remains to be done to correctly implement the party's orientations about enhancing the effectiveness of the geological processing of useful minerals.

Regarding the work in the geological sector in the spirit of orientations which the Eighth Plenum of the Party Central Committee made and tasks which it assigned to us, as well as the very valuable recommendations of Comrade Enver Hoxha at this plenum, the collectives of geological enterprises, guided by the basic party organizations, made a thorough analysis of accomplishments up to the present time, weaknesses and deficiencies in their work, and defined the ways in which to proceed to accomplish the great tasks provided in the seventh 5-year plan with regard to fulfilling the geological and industrial mineral reserves and further opening long-range prospects for the major known existing minerals and for new minerals.

The materials of the Eighth Plenum of the Party Central Committee were acted upon by each brigade, team and expedition of geological enterprises, in each group, department and sector of the Institute of Geological and Mining Studies and Projects, where geological exploration and scientific study conducted between 1976 and the first half of 1980 was analyzed, the tasks and problems areas of scientific work which will be conducted in the next 5-year period were reexamined and the plans and measures for the accomplishment of these tasks were drawn up. Kept in mind during the review and drafting of these plans and programs were the broad public discussions of the draft of the seventh 5-year plan as well as all of the possibilities for cooperation among geological, geophysical and hydrogeological enterprises, the institutes of technology and of geology and mines, as well as other of the country's institutions.

In the themes and programs drafted for the enhancement of scientific research and in the analysis and implementation of tasks of the Eighth Plenum of the Central Committee of the Albanian Workers Party for carrying forward the exploration and discovery of new sources and types of mineral ore, more correct rapports were established between present and long-range themes, between one mineral and another, between research and exploration, defining the individuals who will engage in them, facilities, investments, etc. Emphasis has also been placed, among other things, on respect for schedules for the completion of studies and their implementation because we have had major shortcomings especially in this area. Thus, of the themes which were planned to have been completed, those on the prospects for nickel-free iron ore, radiometry and bauxites have been finished, while the polymetals theme has not yet been completed. Even though a number of themes of various subjects were to have been completed this year, nothing has been done on several of them or the complex studies and evaluations have not been completed. Within this framework a strong effort must be made to counter the mistaken tendency whereby, while the themes on the Council of Ministers' and the ministry's topics are worked on more seriously, those of enterprises are underrated and are not performed on schedule since scientific study is not regarded as being organically connected with the overall effort to accomplish the plan's tasks.

It is an indisputable fact that the overall development of geological sciences and the geological mind, the qualitative and quantitative growth of cadres, specialists and other workers in this sector, the rich experience gained struggling against difficulties, as well as the strengthening of the material base constitute the guarantee to advance at a faster pace. However, as Comrade Enver Hoxha teaches us, we should also be aware of the shortcomings and weaknesses in our work, the causes of certain nonachievements and, relying on advanced experience, we should combat them and carry forward our entire research and exploration effort and scientific study in the field of geology.

The successful fulfillment of tasks which the party assigns in the field of research and exploration of useful minerals requires the enhancement and further intensification of all scientific research. In this framework, among all of the geological research and exploration activity, assuming special significance are study of generalizing themes, relief maps on various scales, as well as generalization of data obtained from time to time through activities at the various mining sites.

It is a fact that a fine effort is starting to be made in these directions. The level of various geological, geophysical and geochemical studies has risen and the range of minerals being studied has expanded. As a result, the number and quality of recommendations provided have been improving from year to year. Nevertheless, the areas covered by geological relief maps for several zones are still small. Weaknesses and shortcomings still exist in the coordination of different methods, as in the initial phase of a project and in that of carrying out tasks, which has caused the recommendations given in some cases not to yield the expected results. Therefore, attention has concentrated on the generalization of advanced experience, making wider use of geological, geophysical and geochemical methods, extending them into new areas and regions and increasing the depth of geological exploration studies. In the next 5-year period it is anticipated that the relief area will increase and the use of complex exploration methods will expand, especially the introduction of new more effective methods for the research and exploration of various minerals.

At the Eighth Plenum of the Party Central Committee it was emphasized that one of the main objectives of geological studies and research is the complex evaluation of our mineral resources, the extraction of all useful elements contained in the ore studied and putting it at the service of the economy.

It is a fact that copper ore, for example, has been estimated to contain a number of such elements as cobalt, sulfur, arsenic, zinc, selenium, tellurium and even precious metals. Many of these are extracted during its processing, some others by the Institute of Technology and the Institute of Metallurgy, but much remains to be done to reach the goal set by the party to obtain their full value.

Naturally, the overall estimate and exploitation of our mineral resources is related to a series of matters which requires optimal solutions, both by geological workers and those in exploitation. However, the task of geological workers is, through their research and study, to make an overall evaluation of the mineral ores, the zones and regions where geological activities are conducted. The thing is, by using new scientific methods, to evaluate not only the mineral that forms the bulk and which is the object of the exploration, but also its related elements which, although minute in quanity, are of special interest and of great economic benefit.

A series of important technological problems have been identified through laboratory and technological studies conducted for certain mining sites. The mineralogical composition of minerals, the form of relationship and the physical and mechanical attributes, the chemical composition and the useful and harmful elements found in them have been studied and identified. The conclusions resulting from these studies have served and serve to identify the technological scheme for the complete extraction of useful components of the mine, either through enrichment or other technological ways. In order for the data to be a complete and accurate as possible for definition of the technological scheme for the full extraction and exploitation of useful components of the mine, mineralogical, petrographic, spectral, chemical and other physical and mechanical studies necessary for the full evaluation for the substantial composition of mineral ore are being conducted at the laboratories of geological enterprises and the Institute of Geological and Mining Studies and Projects. However, despite these achievements, we can say that we are still at the beginning of an intensive scientific effort in this field because the studies are not always done fully and accurately, nor are the laboratory resources used with the required effectiveness, whereas work with individuals to strengthen scientific discipline is not yet at the required level. Therefore a series of measures of an ideopolitical, technical and organizational character have been provided and are being implemented to carry forward the work started for the complex evaluation of mineral ore, setting it on a more sound scientific base, so that in the future a mine will not go into operation without a thorough evaluation of the related elements which the primary mineral contains and without resolving the technological aspect of mining and processing mineral ore.

The fine results achieved in increasing industrial and geological reserves, along with the prospects which have been opened, have improved the balance of reserves for known and new minerals, which constitutes a guarantee of having higher rates in increasing the production of the mining and processing industry in future 5-year periods. During the sixth 5-year period a new step was taken especially to increase the mining sites for chrome, copper, ferronickel, nickel silicate, coal, phosphorites, construction materials and a series of new minerals, such as polymetals, bauxites, precious metals, heat resistant argil and kaolin clays, iron, etc. All of These have provided a sound base of raw materials and have opened clear perspectives in several zones and regions. On the basis of results achieved, the task is to make a complex evaluation of all zones and regions for all types of minerals, especially those zones where geological exploration is still at a relatively low level, such as in the districts of Gramsh, Skrapar and Permet and in the Korabi area and the Alps. Their correct evaluation requires a serious effort not only by the geologists of the enterprises which cover these districts but also by the Geophysical Enterprise and the Institute of Geological and Mining Studies and Projects. The mining enterprises also have very important tasks for the complex exploitation of mineral ores, to increase their value by means of enrichment and increasing recovery of associated minerals and elements, as well as to improve the exploitation system, to cut losses to the maximum, which are high at many mining sites. Losses in the mining of ferronickel, for example, are 26 to 30 percent, chrome 10 to 15 percent, coal 20 percent, etc.

Intensive scientific experimentation and study of coal discovered in order to enrich and use it for coke is one of the very important tasks that the party presented to all workers of the industry for solution. This requires improved cooperation and organization of the scientific research of the Institute of Technology and the Institute of Geological and Mining Studies and Projects, the mining enterprises, the enrichment plants, the geological enterprises, as well as the University of Tirana and the Party Steel Metallurgical Complex. Likewise, the geological exploration activities have secured argil and kaolin, bauxite, phosphorite, pyrite, salt and other things. Many of these are being exploited and used, but some need to be enriched in order to be used with high economic effectiveness. Naturally, geological research continues in order to find even richer and better quality mines than those discovered thus far, for these minerals and raw materials as well. However, the arrangements made for enriching them need to be evaluated better in order to obtain high quality concentrations.

Large reserves which might grow even larger in the future have been secured in several new types of minerals, such as aspestos, titanite magnetite, etc. The question now is to put these high valued resources to use as soon as possible in order to meet the demands of our economic development and for export. It must be said that from the standpoint of economic value, these new minerals rank along with those that are in use. Besides this, these minerals, especially asbestos and titanite magnetite, are esploited by conveyor, the construction of plants to enrich them has a straightforward technology and can be done by our own resources.

The task facing our geological research services, stressed the Eighth Plenum of the Party Central Committee, is to further increase the effectiveness of geological research, which is still poor. The implementation of this recommendation requires that research activities be correctly harmonized with exploration activities and intensive efforts with those shallow, that all work be of high quality, from full production of the sample or model, reaching the error-free point to the deep scientific completion of materials and data provided by this work. The state and economic organs, scientific institutions and study groups, the Institute of Geological and Mining Studies and Projects and the generalizing groups at the enterprises, which constitute the nuclei of scientific work, have concentrated their attention precisely in these directions.

We are well aware of the fact that the effectiveness of geological discovery expressed in tons of mineral ore for each meter of drilling performed appears with emphatic variance from one enterprise to the next. Thus, for example, for chrome it varies from 10 to 26 tons per linear meter, for copper from 15 to 28 tons per linear meter, for coal from 1000 to 1500 tons per linear meter. This indicates that the reserves for increasing the effectiveness of drilling are numerous. It is clear that the effectiveness varies for different mining sites, which depends on the deological structure and on the conditions of the formation of useful minerals. However, when we talk about differences and reserves, we are talking about situations where the conditions are approximately identical. Looking at it from this point of view, it seems that during this 5-year period the highest effectiveness in tons of ore per meter of drilling has been achieved for copper ore by the geological enterprises of Rubik, Puke and Kukes, for ferronickel by the geological enterprises of Tirana and Korce, because a better effort is made at these enterprises for the application of technical and scientific discipline, for intensive studies and projects, for the creative application of geological, geophysical and geochemical methods under the specific conditions of each mining site, zone and region.

An important role in increasing the effectiveness of geological exploration is played by the use of new drilling and advancement methods, as well as the specification of an optimal technology at the mine shafts, in keeping with the geological structure and the geological situation of each mine site. However, despite the improvements which have been made in the introduction of new drilling methods, as well as in other work processes, we are still far from what is required for the present development of geological exploration. Therefore, work is being done to put the drilling technology on more profound scientific bases, to find new ways and possibilities for increasing the drilling speed per month, which is also a basic technoeconomic indicator of the effectiveness of geological exploration.

A great deal of experience has been aquired in this direction. However, a well organized effort is needed to study and generalize it, as well as the geological data acquired through work performed and that gained during mining operations. It is known, for example, that a big influence on increasing the effectiveness of geological research is the correct scientific determination of working networks, i.e., the distance the workings are established from each other. For example, at coal mining sites with category C1 reserves the 100x100-meter exploration system is usually used. However, 400x400-meter systems also exist for the same category. Through generalizing studies which have been made on the basis of years of data on mines which are in operation, changes are being made with regard to both the sparsity and density of the network of geological workings according to the specific conditions of each zone and mining site.

Many mines that have been operating for a long time, such as those at Bulqize, Memaliaj, Mborje-Drenova, Kurbneshi, Spaci and others, have yielded valuable factual material concerning the degree of accuracy of reserves discovered through geological exploration. The conclusions reached through their generalization are also being used in research and exploration of mining sites analogous with them. The study of this data also makes it possible to better define the laws on types of mineralization, the dimensions and geomorphology of bodies, their density and their faulting and separation tectonics. On this basis, for example, research and exploration at the Bulqize mine has been and is being done by drilling not only at the surface but also underground, which avoids much unnecessary drilling would have been needed on the surface to operate at great depths and creates normal conditions to work year round. The generalization and dissemination of this experience, extending it to similar objects and mining sites, will greatly increase the pace of research and exploration. This requires, among other things, that the department of methodology at the Institute of Geological and Mining Studies and Projects pursue and generalize this experience better and, in cooperation with the specialists of geological enterprises, it should be implemented wherever possible.

The experience gained indicates that the use of geophysical and geochemical methods yields fine and quick results in the right orientation of geological work. These methods are therefore finding wide usage from year to year, covering greater areas of land. Possibilities exist to use them even more. In particular, the geophysical enterprise in Tirana has the task to preceed the other geological enterprises with complex studies in this field. Naturally, the broader and more effective use of these methods also requires increased capabilities on the part of workers who will use them, especially for in-depth studies. It requires that specialists assimilate well the technology used to apply these methods and also interpret correctly the data obtained through them.

At the 8th Plenum of the Party Central Committee, Comrade Enver Hoxha stressed that "In scientific research, as in every other activity, the politically and ideologically educated and the scientifically trained person is the deciding factor for making progress."*

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* Enver Hoxha, "The Country's Advancement is Inseparable From the Development of Science and Technology," Brochure, p 37.

One of the great successes of the party's policy is that the work in the field of geological exploration is today directed by a powerful army of our own cadres and specialists who have assembled rich experience and have resolved and are solving some of the most complex problems.

However, the current status of the development of geology and the solution of great and complex problems of the times in this field requires that a better organized, studied and planned effort be made to qualify technical engineering personnel and workers using various forms and ways, from individual and classroom study to post-graduate work. For this purpose, the qualification programs are being improved at enterprises and institutions of the geology sector and their implementation is being pursued better. Special attention is being paid to the training of drillers, motor operators, miners and other in courses which have been set up at several geological enterprises. The fact that the category of the workplace does not yet coincide with the personal category of workers and that some accidents happen because of insufficient knowledge on the part of drill operators indicates that a special effort must be made not only to train but also to continually qualify these workers.

Without good training of cadres and specialists of various profiles, the technical material base which exists and grows stronger each day in the geology sector cannot be utilized very effectively, either from the standpoint of high productivity or the standpoint of maintenance.

Much machinery and equipment has been and is being produced locally, such as drilling rigs, water pumps and other equipment, which from day to day is making the geology sector more independent from importing. However, how much to the geological workers care about safeguarding and fully utilizing their machinery and equipment in keeping with technical regulations? In general, by virtue of the work done by the basic party organizations and especially the trade union organizations, the geological workers take proper care of the machinery and equipment which they use. However, ther are also instances where the machinery is misused, is not overhauled on schedule and is not fully employed, such as at Bulqize, Burrel, Puke and Rubik. These deficiencies are rooted not only in carelessness and lack of conscientiousness, but also incompetence and lack of necessary qualification.

The theme of fruitful scientific studies which were conducted during this 5-year period in the geology sector indicates that cadres and specialists of geology are able to resolve the most complicated problems, therefore the theme of these studies for the next 5-year period will be even broader and concerning qualitatively more significant problems. These and the accomplishments made up to now in practical research and exploration for useful ore are a sound basis for accomplishing greater tasks in the coming 5-year period.

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INTENSIFICATION OF PRODUCTION IN AGRICULTURE DISCUSSED

Tirana RRUGA E PARTISE in Albanian Nov 80 pp 24-33

[Article by Lufter Xhuveli: "Enhanced Intensification of Production Puts Great Tasks on Agricultural Sciences"]

[Text] The intensification of production at the present time is the most important characteristic of the development of all branches of our agricultural production. This characteristic, as the Eighth Plenum of the Party Central Committee stressed, "makes even more essential the need to rely strongly on advanced science and technology, on awareness and implementation of their results, on the use of new scientific techniques, technologies and methods in all sectors of production...."

The levels attained up to now in the various branches of the agricultural economy are a result, among other things, of the greater and greater introduction of advanced science and technology into open production. We find high effectiveness in the application of science to production, especially in the vanguard agricultural units.

However, the demand to advance scientific work in agriculture, to raise it to a higher quality level and to apply its data to open agricultural production emerges as a permanent and timely essentiality, especially if we keep in mind the complex nature of agriculture, where many of its branches and subbranches develop within the same economic unit and where production results depend on a series of interrelated factors. Finding the most suitable production variants and ways and applying them in practice today constitutes one of the important objectives of the development of agricultural science.

The characteristics of agricultural production, such as its extension over vast areas, in various ecological zones, on plains, hills and mountains, the great volume of production, the complex and synchronous reciprocal effect of mechanisms, microorganisms, plants, animals, climate and man himself on the soil and on plantlife, require that the scientific studies be diverse, of high quality and have a massive character. In this framework, great tasks emerge before communists, workers and specialists in agriculture. In particular, of special importance is the further growth of the leadership role of party organs and grassroots organizations in agricultural enterprises and cooperatives and especially in the agricultural institutions and scientific research stations.

Growing Tasks Require Deeper Conception of Scientific Research

At the Eighth Plenum of the Party Central Committee, Comrade Enver Hoxha stressed that the successful achievement of set objectives in the situations created and in the present stage requires "a more accurate conception of scientific work and the development and enhancement of the technical and scientific revolution in general."[1]

The advancements in agricultural production are also conditioned by the advanced scientific concepts and ideas held by the workers who are involved in production. The party there, besides measures to strengthen the material and technical base, has made a great effort to effect radical transformations in the concepts of workers and cooperativists, cadres and specialists in agriculture. Nevertheless, it is a fact that the new and the progressive have been and are being implemented in production with difficulty. A very great persuasive effort, many experimental tests, arguments and various work forms have been needed to introduce advanced science and technology. This occurred a few years back with the use of new seeds, especially hybrids, with the use of planting machines, cultivators, the introduction of new agricultural crops, the artificial insemination of animals, mechanical milking, new techniques for raising livestock, etc. The old ideas and practices which have been replaced with new ideas and practices of a more profound scientific content only in the process of development through a thorough effort and struggle.

However, the problems which have to do with the formation of concepts and attitudes about various aspects of the intensification of agriculture cannot be considered overcome. At certain moments, as a result of superficial effort not properly supported by scientific data, or low level organization and management, and failure to find suitable ways to overcome certain production difficulties which arise in the production process, it happens that production tasks are not carried out at the level planned. But it is even worse when these unaccomplishments are used by some as "arguments" for reaching conclusions and for forming incorrect concepts and opinions which, when not opposed and not rejected, hinder the solution of problems and the accomplishment of planned tasks.

In several districts of the country, for example, for several years they have been planting varieties of hard wheat over large areas, but the yield is not satisfactory, the quality and especially their flintiness is low. Under these conditions, some cadres and specialists have started to have unfounded ideas that perhaps "the hard wheats are not for our conditions," that "they are not worth planting," etc. As a result of these concepts, a tendency exists at certain agricultural units to reduce the areas sown with these types of wheat and to reduce care and attention for them, considering the production planned for these areas to be unattainable, even at planting time.

Analysis indicates that these concepts and attitudes have no scientific basis. The causes of the nonfulfillment of the production planned for the hard wheats lie in the fact that the specialists and cultivators of this crop have not made a thorough study of the biological characteristics of this plant and therefore do not meet its requirements for tilling, fertilization, etc. Thus, this crop is sown late and under poor conditions. Harvesting has also been protracted. Certain deficiencies of an organizational nature have also had a negative influence. For example, the distribution of these varieties to many brigades and to small areas has caused the cultivators' interest in these varieties to drop. Practice shows that good results have been obtained at those agricultural units where work has been done according to sound scientific criteria, where these types of wheat have been concentrated among certain brigades and sectors and where the services have been performed according to the biological characteristics of these types. at the high-elevation agricultural cooperative of Pojani in Fier District they got 50 quintals per hectare over the entire area sown in hard wheat, in the hilly zones of Fiershegani and Ballagati in Lushnje District they got 15 quintals per hectare this year in an 800 hectare area, as against 15 quintals per hectare which is the national average yield this year for the hard wheats. Likewise, experimental data from the Agricultural Research Institute in Lushnje and the Higher Agricultural Institute in Tirana confirm that high yields of over 40 quintals per hectare can be obtained from the hard wheat varieties, at the same time maintaining the quality of the grain.

The regionalization of agricultural crops and types and breeds of livestock is a well known problem and one which has generally been resolved correctly. However, due to a lack of adequate knowledge about types and breeds, it happens that they overlap into unsuitable areas where they cannot yield the higher productivity. Thus, for example, the "Korabi" wheat, a typical variety for the mountain zones where it has a high yield, this year for no reason was also sown at the Kryevishi agricultural cooperative in Durres District. Likewise, the "Black Spotted" breed of cow, which has been regionalized in the lowland areas and districts where its high capacity for milk and beef production can be exploited, can also be found at the mountain district agricultural units.

Scientifically unfounded ideas and practices are also manifested in connection with the various factors which affect crop and animal productivity, which at several units has led to the overrating of one or two factors and the underrating of other factors, with negative results in the accomplishment of planned tasks by these units. Thus, for example, the agricultural units of Lushnje and Durres districts are doing very well in that they are planting cotton by the month of April, but are doing poorly in that they are not showing the same concern and are not taking all measures necessary to assure the most rapid germination as well as the necessary number of plants per hectare, and it happens therefore that germination concludes at the end of May with large shortages of plants per hectare, with very negative consequences for the further development of the crop and for obtaining the required yields and product quality.

However, there are occasions when the scientific work itself is not conceived in its entire breadth, complexity and versatility. Thus, one occasionally hears that several cadres and specialists in districts and agricultural units identify scientific research with scientific experimentation and claim that things are proceeding well in this field since they have undertaken so many experiments. Naturally, to engage in experiments is truly a positive scientific event, but this is not everything. Scientific work is very much broader. It is connected not only with experiments and studies, but also with drawing conclusions from them and with the generalization and dissemination of results through seminars, actives, scientific sessions and various publications, with the implementation, through science, of conclusions and scientific data in practice, and not only conclusions drawn from one's own unit but also those drawn from other units in the district and other districts of the country. The same thing should also be said in connection with the implementation of techniques, technology and scientific conclusions reached by other countries, in order to apply them in keeping with the specific conditions of our country and of individual units within the country. Without such a broad concept of scientific work and its development consistent with the tasks and requirements of our modern production, there cannot be a proper understanding or implementation of the recommendation that Comrade Enver Hoxha made at the Eighth Plenum of the Central Committee of the Party, that "Scientific work entails a generalization, improvement and transformation of everything positive in practice and in theory, a qualitative eruption, so to speak, a revolution in production, techniques, technology and organization, ... in various fields of our development, providing solutions to current problems which life brings up, and opening up perspectives."[2]

Do Not Separate Raising the Level of Scientific Studies from the Level of Implementation of Their Conclusions in Production

The results achieved up to now in agricultural and livestock production are inseparable from the achievements in the development of science. The great transformations effected in our country's agriculture, including the achievements in clearing and acquiring large tracts of hilly land on our southern coastline, the settling of hills, the creation of domestic hybrid seeds, the overall high results achieved at the Maliq agricultural enterprise and at the high-elevation cooperative of Plasa, the high level of production at several livestock complexes, such as the unit for cows at Kamez, where they have been getting over 4,000 liters of milk per head for several years, and many other examples, materialize the level reached in the development of our science. At the same time they indicate the great possibilities which we have to develop it further in breadth and depth and to make it a strong support for the accomplishment of great new tasks which we are undertaking for the future in the field of enhancing our agricultural and livestock production.

Comrade Enver Hoxha emphased at the Eighth Plenum of the Party Central Committee that "the level of scientific work should be raised in an effort to implement the plan."[3] The main directions in which scientific work in agriculture should be aimed are clearly defined in many of the party's materials. Studies about the soil, fertilizers, irrigation, the mechanization of work processes, the genetic improvement of seed, livestock breed improvement, changing the forestry economy into a complex economy, as well as studies on production centralization and specialization, setting up crop rotation, the effectiveness of investments and others require that rapid and sensible quality improvements be made in all our scientific research in all branches and subbranches of agriculture and at every agricultural production unit.

First, the studies and experimentation, which conclude with implementation in open production, must be based more on the achievements and studies of the basic theoretical sciences.

In general, scientific research in agriculture, the implementation of new methods and the use of advanced techniques and technology have provided fine results in increasing production. The conclusions drawn from scientific research generally have been correct and have been implemented in open production. Nevertheless, there are still occasions when, for various problems which upset production, the development of agriculture, livestock, forests, etc., even though studies have been conducted, their conclusions and the pertinent recommendations which have been made have not been verified in production or their dissemination has been limited. Thus, for example, the studies on the effectiveness of the use of fertilizers did not yield the desired results, several new varieties for wheat, cotton and vegetables which were recommended for production did not turn out successfully, such mechanisms as, for example, disc plows for opening rows have been produced but are not used in production, and combinations of food rations for animals were recommended but were not as effective as they should have been in increasing production and lowering the cost of livestock products. In these instances, the value of studies and the effectiveness of scientific work have been negligible. This happens because there is still evidence of empiricism and one-sidedness in some of the studies and because the studies of an applicative nature are not based as they should be on the studies of basic theoretical sciences, on the biological, genetic, physical, chemical and other laws which act upon the soil and plants. Underestimation of these sciences has let to where the scientific level of methods used is low and the modern methods of scientific research are not properly assimilated. Besides this, there are occasions when, at the conclusion of studies, no planning is done about how the scientific data will be implemented, what preparatory work will be done, what preliminary technical and organizational steps will be taken, what material base is needed, etc.

"The development of applied sciences," Comrade Enver Hoxha teaches us, "depends to a large extent on the fundamental sciences."[4] It is therefore an essential demand of the time that the science departments of the pertinent institutions as well as all specialists and experimenters access this party request better and make the necessary changes to base them better than has been done thus far on all of the scientific disciplines related to the growth of agricultural and livestock products.

It has now become very clear that, for example, scientific studies in the field of agrotechnology and the performance of plant cultivation cannot be complete is they are not also based on studies of the physiology and biology of plantlife, such as photosynthesis, transpiration, standard plant reaction to climatic and agro-ecological factors, etc. Likewise, studies for the creation of new seed, especially hybrids, would be much more precise if based more on ecological and genetic studies. The same thing could also be said about the identification of animal diseases and ways to combat them, about determining the way to feed animals, etc., which demand fuller reliance on biochemical blood data, on animals' metabolic profile, etc. Conditions have now been created for making broad use of such statistical mathematical methods as analysis of dispersion, correlation, regression, etc. in various studies, including those in agriculture.

Secondly, the studies for increasing production should not be detached from the studies for improving its quality.

The continued growth of the people's wellbeing, the strengthening of the processing industry, especially the growth of exports, have raised as a critical and essential problem the improvement of the quality of agricultural and livestock products. "A great problem of the economy," stressed the Eighth Plenum of the Party Central Committee, "is the qualitative improvement of raw materials, other materials and ready-made goods." This is not only one of the most crucial but also one of the most difficult problems to which agricultural workers, specialists and scientists, guided by the basic party organizations, should provide a solution as quickly as possible. Such problems exist in all branches and subelements of agriculture. Thus, for example, during the past several years, as a result of measures taken to implement the party's orientation regarding the fulfillment of requirements for domestic sugar, the output of sugar beets has visibly increased, but this has not been accompanied by a proportionate increase in the quantity of sugar per hectare because the percentage of sugar per unit of production has decreased. It is therefore necessary that scientific studies go more deeply into the study of the biological requirements of the seeds planted in order to recognize the dynamics of sugar accumulation in the root of the sugar beet in various phases, to define and implement the appropriate cultivation technology, the dosage and timing of fertilization, etc.

Concerns and problems of this nature also exist regarding pork production. While efforts are being made to increase the output of pork per sow, the pork has a high percentage of fat and little is being done to improve its range. There is room for qualitative improvements in the production of wheat, to enhance the protein and gluten content in the head of wheat, to enhance the range of flour and bread and the technological qualities of ripeness. Of similar interest is the research and experimentation to enhance the amino acid content of corn, to produce white corn with glossy kernels, to increase the percentage of oil in the sunflower, to increase the length and strength of the cotton fiber and to enhance the sugar and vitamin content of vegetables and fruits. In animal husbandry, greater attention than has been shown up to now is required to increase the percentage of milkfat, to improve the quality of leathers, etc.

Third, we should view the studies and measures for increasing products in unity with those for improving economic and financial indicators.

It is a known fact that an increase in output is generally accompanied by reduced production expences and a lower cost per unit of production. This has been confirmed wherever we have advanced experience. At the Maliq agricultural enterprise the output of wheat has risen annually. This year they managed to produce an average of 51 quintals per hectare over the entire area planted in wheat. Along with this, the cost of producing each quintal of wheat has decreased. From 89 leks in 1977, it reached 69 leks in 1979 and about 58 leks in 1980. The sectors with higher yields than this enterprise's average have spent even less per unit of production. In the sectors of Drithazi and Sovjani they spend about 49 leks per quintal of wheat. This occurs because the studies made and the technical, technological and organizational measures taken to increase production are viewed in close relationship with the economic and financial aspect, with the economic advantageousness, seeing the indicators of production growth in unity with the economic and financial indicators. But this does not happen universally. In quite a few cases signs of onesidedness are apparent, real studies are made and measures are defined and implemented to increase production, but without bothering to determine the cost of achieving it. There are quite a few agrozootechnical measures which are still carried out with poor effectiveness and, as a consequence, the products are high priced. Thus, for example, in quite a few of the country's agricultural units a one-quintal increase in wheat is obtained with the use of about 62 kilograms of chemical fertilizer, at a time when this is being obtained at the Maliqi agricultural enterprise with about 26 kilograms of chemical fertilizer. In livestock, the meat and eggs are still produced at a high cost, while in some production units the production of milk, fruit and cotton is carried out with relatively high expenses. It is a fact that the goal of production in socialism is the fulfillment of ever-growing needs through increased production with as few expenses as possible. Therefore, the increase in productivity is a very important objective of scientific research, about which, as Comrade Enver requests, the party organizations should also be more concerned than they are and seek the rigorous implementation of the party's orientations by state and economic organs.

Fourth, we should proceed at a faster pace in conducting studies and especially in applying them to open production.

In order for agricultural science to respond as it should to tasks which the present stage of the intensification of agriculture sets forth, it is essential, as the Seventh Party Congress emphasized, at studies precede the solution of production problems. Numerous examples of understanding and successful implementation of this orientation abound in all fields. Such are the agrochemical soil study, the local creation and production of corn hybrids, long-term studies on the irrigation system, etc. Other studies of importance to the economic are being conducted on a national level on centralization and specialization of production, crop rotation, the establishment of centralized centers for meat production. However, in some sectors, in comparison with the others, a backwardness exists in such areas as fruit culture, vegetables and especially in the production of forage crops. Studies in these areas have been few and scientific work has not always led to the solution of production problems.

Relying heavily on experience gained and conditions created by the strengthening of the material and technical bases, by the increase in the number of specialists and by the enhancement of the educational, technical and professional level of agricultural workers, all of the conditions exist to intensify agricultural production at a rapid pace, especially in the lowland areas of the country. However, this requires more intensive studies than those done through the present time, both by the scientific institutions and production specialists. Keeping in step with the times in our scientific studies is now a key point for the rapid increase in agricultural and livestock products. Thus, had we started working on the selection of the sugar beet seed 10 to 15 years earlier, today the results would undoubtedly be better and it would not be necessary for us to import the seed.

Besides expansion of the problems under study, the use of modern and rapid methods to shorten the term of studies and scientific research and to create new types of seeds is today extremely important. This is of particular benefit in selection, where the creation of new seeds requires a lengthy period of time--from 6 to 12 years--as the occasion demands. Thus, the use of accelerative methods for the creation, for example, of a new strain of wheat can cut the time in half, from 10 or 12 years to 5 or 6 years, whereas for multiplication of the sugar beet, from 6 down to 3 years. Our scientific research center now have the possibility to reach such objectives except for a correct accessment and a better organized and plan-directed effort.

Also deserving correct accessment is the fact that the intensification of scientific research would not produce the desired result without the intensification of the effort to apply the data and conclusions reached through this effort to open production. We emphasize this because, without denying the successes, there are still occasions when the data from certain studies are not being applied quickly to production. For example, it is known through pedological studies that there is much acid soil in our country, but measures to improve it, especially liming, are being taken at a very slow pace. It is a fact that we are currently using many chemical preparations to protect crops from diseases and pests but the results are not all good and, nontheless, the establishment of prognosis and indications centers is going slowly. The establishment of these centers would not only greatly reduce expenditures for chemicals, a portion of which are imported, but also increase the effect of chemical treatment. Completed studies indicate that synthetic urea can be used to great advantage in silage feed and in other combinations of feed to fulfill the protein balance of livestock. Several enterprises and cooperatives in the districts of Korce and Kolonje are successfully implementing this scientific recommendation. However, this is proceeding slowly in the other districts. Such problems exist in every agricultural unit and in every district. The documentation and taking of quick measures for applying them to open production would give a great and swift impetus to the accomplishment and surpassing of tasks which the party has set before the workers in agriculture.

The problems of the more rapid development of agricultural sciences and their greater influence on the growth of agricultural and livestock production are also connected with many other factors, such as better planning and organizing of scientific work, further strengthening of its massive character, worker qualification, growth of the role of specialists, reinforcement of material and laboratory resources, better organization and condensation of generalized scientific activity, increasing publications and raising their scientific level. Among these, raising the qualification level of production workers, specialists and cooperativist, as well as workers at scientific institutions, is one of the most important links of this chain because, as the party teaches us, the intensification of production and qualified work with scientific criteria also requires qualified people.

With a through understanding of the tasks laid out by the party at the Eighth Plenum of its central committee, through an even greater mobilization of all communists, agricultural cadres, specialists, scientists and all other agricultural workers, and with the growing leadership role of the party's basic organizations, all of the possibilities exist "for us to put science and technical advancement better at the service of the country's present and long-range development, for the development of the economy, education of the new man and further strengthening of the Fatherland."[5]

FOOTNOTES

1. Enver Hoxha, "The Country's Advancement Is Inseparable From the Development of Science and Technology," Brochure, p 18.

2. Ibid., p 19.

3. Ibid., p 14.

4. Ibid., p 9.

5. Ibid., p 4.

5658
CSO: 2100

INDUSTRIAL ACHIEVEMENTS IN JANUARY 1981

Sofia IKONOMICHESKI ZHIVOT in Bulgarian 25 Feb 81 p 6

[Text] The production of basic industrial products in January is as follows:

	Measures	Manufactured production in January	January 1981 in percent to January 1980
a	1	2	3
Electricity	million kilowatt hours	3,186	107.2
Coal	thousand tons	2,400	101.2
Briquettes	thousand tons	103	92.9
Rolled ferrous metals	thousand tons	258	104.2
Sheet iron	thousand tons	102	114.1
Plastic coated sheet iron	thousand tons	1.6	144.4
Steel pipes	thousand tons	22	106.4
Electrical instruments	thousand pieces	27	100.3
Phosphorus fertilizers	thousand tons	12	115.0
Oil-based paints and varnishes	tons	3,830	126.0
Polyethylene sheet	thousand tons	1.7	101.3
Synthetic fibers and silk	thousand tons	9.1	116.1
Cement	thousand tons	360	101.5
Bricks	million pieces	66	118.4
Paper	thousand tons	28	106.8
Household glassware	thousand leva	2,344	102.3
Ceramic tiles	million pieces	21	108.7
Cotton textiles	million meters	29	101.3
Silk textiles	million meters	3	105.3
Knitted outer garments	million pieces	3.6	106.7
Tailoring materials	million leva	25	115.9
Meat products	tons	6,257	107.0
Tobacco products	thousand tons	7.2	103.1

Committee for Unified System of Social Information

Commentary

The results for the fulfillment of the plan for the first month of the year in the basic branch of the national economic complex--the industry--show that the basic part of the branches and economic enterprises has begun 1981 with a good preparation for solving the new, even bigger problems of the production in the five-year plan. Despite the difficulties created by the adverse atmospheric conditions, the commodity production plan for January has been fulfilled by 100.2 percent. In comparison with the same month last year, 9.5 percent more products have been manufactured. The plan for many important products has been overfulfilled: electricity, coal, briquettes, battery-driven trucks, motor trucks, synthetic fibers and silk, tires, polyethylene sheets, lumber, particle board, textiles, knitted outer garments, meat products, fish, cheese, and many others.

The Committee for Heavy Machine Building, the Economic Combine Cables and Conductors at Burgas, the State Economic Trust Bulgarian Brewery, the Economic Combine for Applied Chemistry Verila and others have overfulfilled their tasks for the realization of their production.

However, in many branches and economic organizations the existing preparation and work organization still do not ensure the complete fulfillment of the plan for the first quarter. In many places, unevenness of production on individual days of the month is still tolerated and this leads to incomplete utilization of production capacities and manpower. This, in turn, affects the timely fulfillment of the contractual obligations and the timely acquisition of financial resources from the realized production. Many branches expedited large quantities of production in the last days of January, and as a result ended the month with an unfulfilled realization plan, even though they produced more than the planned production.

The rhythmical nature of production is impeded to a great degree by the incompetent and untimely supply of some raw and other materials, and, especially in machine-building of the cooperative supplies. Reasons of this nature are related to the causes for the plan fulfillment failure for the month in 103 branches, and also in the production of some important products: nitrogen and phosphorus fertilizers, internal combustion engines, lathes and shoes.

There are many branches which do not fulfill their production schedules because of organizational and other weaknesses of internal character. Similar causes are related to the lagging behind of the greater part of the branches which have not fulfilled their plan for commodity production in the system of the Ministry of Forests and Forest Industry and the Ministry of Internal Trade and Services.

The main resources for securing the fulfillment of the industrial quarterly plan in both quantitative and qualitative indices should be sought in improvement of the contractual discipline and the creation of favourable conditions for full utilization of the production capacities and manpower during every hour in every work shift.

9804
CSO: 2200

ENERGY USE, CONSERVATION IN CHEMICAL INDUSTRY DISCUSSED

World Energy Crisis

Prague CHEMICKY PRUMYSL in Czech No 1, 1981 pp 41-43

[Article by Josef Par, CSR Ministry of Industry, Prague: "Fuel and Energy Conservation in CSSR Chemical Industry"]

[Text] The entire world is exploring the possibilities of fuel and energy conservation at the present time. Although the motivation of efforts to reduce fuel consumption is different in the capitalist and socialist states respectively, the essence of the problem is the same. The development of industry and of the living standard quite logically requires an increase in consumption of fuels and energy whose supply is limited and whose transportation and production are both economically and technically increasingly demanding. Past development indicates that fuel and energy consumption doubles every 15 years and that such dynamism cannot be maintained in the future. With due regard to safety and ecological requirements, it is imperative both to prolong the use of known sources of supply and to carry out feasible technical measures in the area of mining and transportation. The energy crisis, which is reflected in the rapid price increases throughout the world, necessarily also affect the economies of the socialist countries. These price increases on the world markets are to some extent objective and also exert influence on the price level in the CEMA countries because mining operations there are also moving to the less accessible areas, worse geological conditions or to deposits of inferior quality and lower yields.

An analysis of our potential energy sources has revealed that our coal supplies are limited and that output will rapidly decline after the year 2000 even if we exploit exploit deposits with a low caloric value at high economic costs. While 2.5 cubic meters of overburden per ton of coal had to be removed in 1980, the removal of 4 cubic meters of overburden will become necessary after 1985.

The development of coal-fired power plants is impossible not only in view of the limited coal deposits, but also for ecological reasons. The development of nuclear power plants also has its limitations, both for economic reasons and the difficulty in finding suitable locations. Investment costs per MW in nuclear power plants are more than twice as high as in the coal-fired power plants and are in excess of Kcs 10 million per MW. To meet out needs, we are becoming increasingly dependent upon imports which, according to the present estimates, should account for 39 percent of our supply needs by 1985. Although this is a very simplified view of our supply possibilities, it nevertheless makes it clear that no state, including our country, can embark on this road of solving the energy problem.

There is only one possibility for the entire world to solve this problem--namely, the rationalization of fuel and energy consumption.

By rationalization, the optimum reduction of consumption must be achieved without affecting the living standard. And here precisely lies the difficulty and importance of correct economy measures.

Thus the FRG and Sweden, for example, explore in the first place the possibilities of savings in heating to be achieved by the application of modern control devices and utilization of low-potential heat by means of heat pumps. It was found in both these states that heating requirements can be reduced by as much as 50 percent with this new equipment and utilization of hot waste water. Another approach to the reduction of fuel and energy consumption was announced by the United States in the so-called Carter program. This program affects car production and insulation of buildings, increases automation, deals with some transportation problems and promises big subsidies for energy conservation. The United States consumes 2.5 times more energy per capita than the FRG, but the living standard in the United States is not that much higher.

The GDR developed a long-term program calling for a 5 percent annual reduction in fuel and energy consumption by 1985, and economy measures have been enacted for individual sectors.

The Romanian government approved an economy program aimed at the modernization of equipment and utilization of secondary sources of energy.

Rationalization programs in Hungary focus on reducing energy consumption in industry and call for an 8-10 percent reduction of standard consumption by 1985.

Similar programs for more economical use of fuels and energy have also been worked out in Poland and Yugoslavia. The Long-term program in Poland focuses particularly on the increased production of raw materials for the chemical industry.

The USSR Council of Ministers adopted a resolution in 1978 according to which all sectors were instructed to prepare the drafts of measures for specific comprehensive projects and to specify the requirements for equipment necessary for their implementation. These comprehensive programs are plart of the plan.

In making this comparison we realize that we lag very much behind in these efforts.

Economy Measures Are Absolutely Essential

The importance of rationalization of fuel and energy consumptions is due to our possibilities of supply. The increase in the national income to Kcs 97 billion required 17 million tmp [tons of standard fuel] during the Sixth Five-Year Plan. In the Seventh Five-Year Plan, 10 million tmp must achieve an increase in the national income to over Kcs 100 billion. The same ratio applies also to our sector.

During the Fifth Five-Year Plan, for example, a 1 percent increase in the national income required only an 0.47 percent of increase in fuel and energy consumption. The reality, however, shows that we consumed 7 million tmp more than anticipated by the budget during the Sixth Five-Year Plan. The analysis also reflects consumption in the chemical industry, where the actual development was worse than the original estimate. In comparing CSSR fuel and energy consumption with other states, the areas have been specified which are primarily responsible for our higher energy consumption.

One of the basic causes is the high ration of solid fuels and thus also the lower efficiency of their conversion. The price difference between coal and crude oil, however, cannot be offset by the increased efficiency of power-generating processes. The second factor is the unfavorable macrostructure of Czechoslovak industrial production and particularly the big volume of products whose manufacture consumes much energy. For purposes of comparison, we have considered seven products, expensive in terms of energy consumption, in the CSSR and FRG: steel, pig iron, aluminum, nitrogen fertilizers, plastics, synthetic fibers and cement. THis comparison was very interesting: although the fuel consumption per capita in regard to this group of products is 20 percent higher in the FRG, the analysis of individual items has revealed that the CSSR consumes 30 percent more steel, 25 percent more nitrogen fertilizers, but 250 percent less chemical materials and raw materials per capita than the FRG.

Another reason for our high energy consumption is the obsolescence of capital assets and obsolescent technologies used, for example, in production of ammonia, calcium carbide, clinker, steel and others. Although some reserves still exist here, the basic solution can only be found in expensive investment projects.

The basic way of reducing energy consumption, therefore, lies in the more economical use of fuels and energy in relation to the end products and particularly to products of high technical standards and quality sold on the foreign markets.

It must be generally stated, however, that our products shipped to foreign markets still are not of top quality and therefore command substantially lower prices. In other words, we put too much energy into their production, but the profits is approximately 40-50 percent lower than on top-quality products. Moreover, we frequently export valuable raw materials or semifinished products instead of finished products.

From the materials prepared for drawing up plans during the period of the Seventh Five-Year Plan, it is clear that for further development of our economy we must achieve relative savings of 12 million tmp during the Seventh Five-Year Plan as contrasted with 5 million tmp during the Sixth Five-Year Plan. This means that the 1 percent increase in the national income will have to be achieved with only a 0.52 percent increase in primary resources and not with a 0.8 percent increase as during the Sixth Five-Year Plan.

Since the saving of 12 million tmp represents net savings which already compensate for the effects of increased energy consumption such as coal mining in worse conditions and so on, the overall savings in individual projects must be even bigger if the net savings are to reach the above level.

It is clear from these facts that the national income can be increased approximately 4 percent per year only if energy consumption is radically reduced both in the production and nonproduction sphere. In comparison with the Sixth Five-Year Plan, we thus have only 59 percent of the necessary increase in energy supply and, moreover, some extensive economy processes have already been implemented.

Emergency measures must conform to the extraordinary difficulty of this task and state target programs have, therefore, been formulated for conservation of fuels and energy.

The principal task is to substantially reduce the rate of the iorn production increase and to replace iron by other materials, with the simultaneous reduction of specific weights of products and structures.

Another indispensable condition is reducing the growth rate of fuel consumption in the nonproduction sphere, particularly by the reduction of heat losses in buildings, distribution systems and uneconomical sources of supply. Despite all these measures, the production sphere accounts for half of these savings, that is, 6 million tmp. The planned development must be achieved by the more effective use of primary and secondary sources of energy, measures in technology and overall optimization of consumption.

Development of the Chemical Industry

Chemical industry must plan an important role in solving all these problems. Our goal must be to implement measures which will result in the absolute reduction of standard consumption 10 percent per million Kcs of gross production (HV). This means that standard consumption in our sector must amount to 81 tmp per million Kcs of HV.

This will require setting up a separate technical sector for conservation of fuels and energy which will be backed up by the long-term plan and research and design facilities. Individual products must be examined in the context of the entire raw materials and power generating complex, and technological and raw materials operations must be controlled accordinly. The fuel-power complex fully merits the participation of prominent economic workers in the rationalization project, exploration of potential savings in technology and creation of economic conditions for them.

All general managers in our sector have already been instructed to complete, as part of the long-term tasks, the work on the standards of fuel and energy consumption; to personally review the work of rationalization groups; to pay bonuses to managerial personnel for fuel and energy conservation, and to deal with rationalization tasks as part of technical development.

International cooperation with other CEMA countries plays and will continue to play an important role in these efforts. This area is still not fully utilized or appreciated. At the present time, economic cooperation is carried out on the basis of 35 agreements on specialization and production cooperation in the chemical industry. We have, for example, signed with the USSR chemical industry an agreement on specialization and production cooperation according to which the CSSR specializes in small-tonnage chemical products and buys some basic organic and inorganic chemicals which, in terms of energy consumption and raw materials needed for their production, are much more expensive than our exports. We must mention also our important cooperation with the GDR in the area of the chemical industry.

There are only a few states in the world with an energy surplus, among which are the USSR and Poland.

The possibility exists of further increasing the imports of coal and electricity from Poland, if we offer them in exchange paper and pulp for whose increased production there are more favorable conditions, due to the ample supply of wood, in our country than in Poland.

Preliminary estimates indicate, for example, that for 200,000 tons of paper and pulp exported we could import approximately 2 million tons of pit coal only 10 percent of which we would need for the manufacture of pulp. This makes it clear that we must pay adequate attention to our lumber industry which will thus help us solve our fuel-energy problem. Our petrochemical products also can be exchanged for the import of electricity and thus effectively alleviate our energy shortage.

There still are considerable reserves in this area and some interesting suggestions will require further study. This area also solves energy problems and therefore the individual work commissions are investigating the possibilities of further research measures for conservation of both fuels and energy.

An important issue is the problem of processing crude oil and utilizing its products. It must be emphasized that we must increasingly regard crude oil as the raw material for the chemical industry and gradually less as fuel.

While only 4.5 percent of crude oil was petrochemically processed in the CSSR following an accident in Litvinov in 1975, this ratio will increase to approximately 11 percent after two pyrolysis facilities are put into operation. Nevertheless, even then shall we use almost half of our processed crude oil as fuel for boilers to produce heat. While we import chemical products worth approximately Kcs 13 billion from the KS [capitalist states], among them approximately Kcs 10 billion is for products in which crude oil is the base input raw material. For this reason also, the prices of these products continue to rise. If we succeeded in speeding up the development of nuclear power plants and acquiring equipment for capital investment projects in the chemical industry, with the same amount of crude oil we could become more self-sufficient in raw materials and reduce our trade deficit in chemical products in relation to the capitalist states. We must keep this goal constantly in mind because burning crude oil for energy production at the present rate is no longer feasible.

We must also explore the possibilities of fuel and energy savings in the power-generating processes themselves. We are all familiar with the fact that small and obsolete boilers in industrial plants are inefficient. We must, therefore, find ways of grouping heat plants and heat consumption centers into large units which could be more economically supplied with heat.

THe prices of fuels and energy also play a major role in their conservation. The low prices particularly of solid fuels and of heat derived from them unquestionably increase production costs, but do not encourage their conservation.

The present system of indicators and records also does not provide enough room for the application of economic tools designed specifically to promote fuel and energy conservation.

The new system of management, however, excludes material components and thus weakens the effect of expensive raw materials, fuels and energy. The reduction of material costs will also affect the bonus fund and the fund earmarked for small enterprise investments.

These new tools will thus help us solve our energy problems and our attention will also have to be focused on the economic aspects.

Closely related to this problem is the question of accuracy of measurements, introduction of regulation and, in the future, automatic control by computers as well. The optimizationof processes in complex production technologies and power-generating processes is no longer possible without the most modern equipment. Modern boilers in huge power plants are controlled by the computers because even the problem of burning is not so simple as to be controlled by the human factor alone. Yet this problem is still simple when compared with the actual complexity and high requirements of chemical processes and technologies.

Tasks of Fuel and Energy Conservation in the Chemical Industry

The ways toward achieving successful results have been outlined in the target program of fuel and energy conservation with which our VHJ [economic production units] are familiar. In connection with economy measures, however, VHJ and enterprises will have also to deal with other problems affecting the entire society, such as reduction of consumption of graded coal, light fuel oil, elimination of burning crude oil and others. The following general tasks leading to the conservation of fuels and energy can be formulated:

--elaboration of measures aimed at achieving specified reduction which must be regarded as minimal;

--most effective utilization without delay of all secondary sources of energy;

--formulation of a clear program designed to eliminate all preventable losses;

--formulation and implementation of a technical policy whose goal is the more rapid reduction of energy consumption;

--creation of conditions for material incentives for energy conservation;

--improving the forms of socialist competition in fuel conservation;

--organization of propaganda for drawing large work collectives' attention to more economical use of fuels and energy.

The tasks set for fuel and energy conservation are very important. Yet these tasks are not simple and routine. Without fuel and energy conservation, however, we cannot develop our economy and for this reason all workers who are in charge of their management must participate in fuel and energy conservation. In other words, not only energy experts, but also technologists and other workers.

Slovak Conservation

Prague CHEMICKY PRUMYSL in Solvak No 1, 1981 pp 44-45

[Article by Frantisek Komar, SSR Ministry of Industry: "Some Problems Related to Fuel and Energy Conservation in SSR Chemical Industry"]

[Text] The planned savings of fuel and energy were effected 121.4 percent in 1979. The surpassing of plan targets amounted to a saving of 25,000 tmp. The savings plan was substantially surpassed by the enterprises of Slovchemia VHJ, while the enterprises of Slovcepa VHJ fulfilled the plan only 74 percent.

The Slovak chemical industry as a whole met the target set for fuel and energy conservation during the Sixth Five-Year Plan 118.06 percent as early as the end of 1979. It thus seems probable that, with the savings achieved in 1980, the Sixth Five-Year Plan target will be surpassed by 221,680 tmp. These savings were achieved by reduced energy consumption in the chemical industry and are in harmony with the trend in standard fuel and energy consumption in those production sectors which our ministry follows up and evaluates.

The conservation process is also markedly reflected in the reduction of absolute consumption of fuels and energy. Although the year 1979, when fuel and energy consumption declined below the 1978 level while production in the chemical industry increased 3.57 percent, cannot be taken as the basis for this conclusion, the relative consumption, as compared with the trend during the Fifth Five-Year Plan and particularly with the plan of fuel and energy consumption during the Sixth Five-Year Plan, was noticeably smaller--more than 3 percent in fuels and more than 9 percent in electric energy.

It can thus be objectively stated that the indicators of energy management in the chemical enterprises of Slovakia in general are progressive and will substantially surpass the tasks set for the power sector by the guideline for the Sixth Five-Year Plan. Another question, of course, is whether this level or rate of utilization of fuels and energy is adequate to the needs of our economy or to what extent it is comparable and competitive with the most developed states in the world. Here we would have to look for many reasons and causes, both subjective and objective, in order to find a satisfactory answer.

The Seventh Five-Year Plan covers a period which is substantially more demanding in terms of energy conservation than the Sixth Five-Year Plan and regardless of how the present fuel and energy limits may still be revised, it is imperative to explore all possibilities of eliminating the losses or utilizing all potential reserves without delay. Although the opposite should be true, even the fuel and energy savings to be achieved by the chemical industry are far from creating a balance between fuel and energy needs and their limits (a state target program has been devised for chemical and consumer industries). Yet we know that the so-called other savings resulting from minor economy measures, which are indicated in the state target program as needs for capital investment funds, are based either on estimates of interesting discussions between individual sectors and the FMTIR [Federal Ministry of Technological and Investment Development].

The reduction of fuel and energy consumption in the chemical industry results primarily from the implementation of measures calling for the utilization of secondary energy resources. We have set ourselves the goal of increasing the utilization of secondary resources for energy production by approximately 300,000 tmp per year by 1985 and of secondary sources of heat by more than 1,360 TJ [terajoules] in comparison with 1980. These figures include the practical utilization of now known and exploitable secondary sources of energy in the enterprises of Slovchemia VHJ and particularly the processing of wastes from the pulp industry for energy production. We have in mind the heat plant capacities suitable for burning of sulfite and sulfate extracts, and burning of wood waste in Slovcepa VHJ with the production volume of more than 4 million GJ [Giga joules] per year and approximately 150 GWh [Giga watt hour] per year of electric energy.

It must be emphasized that, when these programs are implemented, the utilization of waste in the plants of Slovcepa VHJ will account for more than 30 percent of total fuel and energy consumption in this industry.

We have still not given up the idea of shipping undried, that is only dehydrated pulp from our pulp mills to other enterprises in the CSSR. With the standard consumption of 0.21 tmp per ton of dried pulp this would represent savings of 13,860 tmp per year. In this context, I would like to emphasize the great national economic importance of construction of pulp-paper combines. For example, by installing additional machinery in the paper mills in connection with the modernization of pulp mills in Ruzomberok and Zilina, we hope to achieve, precisely by elimination of drying, additional savings of almost 30,000 tmp per year.

We also expect a great deal from the modernization of boilers in the chemical industry. In the course of the Seventh Five-Year Plan, we shall put into operation new capacities with a total output of 1,531 tons of steam per hour, 443 tons per hour of which will be produced by the utilization of extracts and wood waste. This includes boiler units of 125 tons per hour and bigger with a 508 percent higher efficiency than boilers which are to be eventually eliminated. With the emphasis on the heating effects of new power-generating centers, we shall gain 105 MW in new electric output, whereby the share of installed output by counterpressure turbogenerators will increase 52.3 percent in the chemical industry, while the share of pure condensation will decline to 5 percent. Turbogenerators predominantly with suppressed condensation will account for the remaining 42 percent. We are planning--and this will obviously become inevitable--to completely discontinue production based on pure condensation, while in condensation production for users it will no longer be electric-energy production, but the distribution of heat which will be of primary importance. This is a measure which may become a subject of extensive discussions because our standard fuel consumption for electric energy production is lower than in the power sector itself. It is possible that we shall continue to produce electricity for production and operations included in the first category of importance. It is necessary, however, to realize anyway that the optimum production variant in relation to standard consumption must be found.

From out suggestions to this effect, the guideline did not include the replacement of two 4 MW condensing turbines in Chemlon Humenne np [National Enterprise] by one 12 MW back-pressure turbine, and the situation is not yet clear as to the solution of energy problems in Slovnaft np Bratislava.

The fourth area in which fuel and energy consumption must become more efficient--a task though not difficult in itself, but all the more complex --is finding a proper system of operation of technological lines and of productions within the limits of minimum energy consumption. The complexity of finding a solution lies in the fact that it is not the energy departments which detail gross production. In many instances the detailing involves the so-called specific product listed in the state plan. Moreover, the production volume continues to be of utmost importance in our country and everything else is subordinated to it. In this respect we could mention many instances in which the standards set for fuel and energy consumption were exceeded, for example, because technological equipment was overloaded.

A very important area is the maintenance of power-generating equipment. We entertain only little hope that the situation will improve in regard to major overhauls of boilers and turbogenerators, and especially in regard to repairs carried out by contractors. The difficulties could be somewhat alleviated, if the repairs were planned by GR [general directorates] and carried out at one place at a time by professional technicians from several enterprises. I also have in mind this approach, which we sometimes call integration or an integrated system, for repairs of heat distribution pipes.

In view of the large fuel and energy consumption in chemical enterprises, the losses in distribution of heat are also not negligible. Due to the continuity of operations, these distribution pipes cannot be shut off permanently, but only in some sections for a limited period of time. The way out of this situation is an integrated system of repairs requiring the concentration of a large labor force from several enterprises even during the preparatory stage of repairs. The general directorates of VHJ in the chemical industry must play the key role in this respect.

On 1 January 1980 we set up the Institute of Rationalization in Industry at the SSR Ministry of Industry. The institute is in charge of fuel and energy conservation. It will already employ 123 workers this year and we expect much of its work.

At the present time, this institute is studying the optimization of burning processes with the use of microprocessors in Chemlon Humenne np and if the tests prove successful, the project will be extended to include several heat plants supervised by our ministry. In cooperation with CKD [Ceskomoravska Kolben-Danek] Dukla, the institute began to work on the utilization of fluid burning of fine, inferior coal in the existing boiler units.

We are exploring the possibilities of conventional sources and introduction, for example, of heat pumps, but we are not considering a wider application of solar energy and use of other unconventional sources for the time being. Through the Institute of Rationalization, we want to gradually review individual enterprises of the chemical industry and on the basis of results and experience to set priorities and specific tasks for fuel and energy conservation. The institute also services burners and has a small center for servicing and assembly of measuring instruments.

We hope to combine our forces also with the workers in the same field at the CSR Ministry of Industry.

To assist enterprises, we intend to have the institute publish a bulletin which will disseminate information on fuel and energy conservation both in the CSSR and foreign countries so far as this information is available.

Without exageration, we can say that we have done much for reduction of energy consumption in the SSR chemical industry during the fifth and sixth five-year plans. At the same time, however, it is necessary to realize that we are far from having done what the needs of the national economy reauire. In the course of the next few years, we want to increase the rate of fuel and energy conservation. We are afraid, however, that--as is becoming clear even today--many fundamental problems that hinder conservation will not be solved.

Urgency of Conservation

Prague CHEMICKY PRUMYSL in Czech No 1, 1981 pp 45-47

[Article by Karel Urban, CSR Ministry of Industry: "Some Problems Related to Fuel and Energy Conservation in CSR Chemical Industry"]

[Text] The importance of fuel and energy conservation stems from the fact that for the identical production increase as during the Sixth Five-Year Plan we have available only half of the increase in fuel and energy supply during the Seventh Five-Year Plan. This means that our entire economic development will depend on how economically we shall be able to manage the available fuel and energy supply, and how rapidly we shall able to propose and implement specific economy measures.

The values detailed for the conservation plan must be regarded as minimal because the requirements exceed the set limits. In addition, there will be a 2 percent annual increase in the prices of fuels and energy which must be absorbed in the production costs and this will be possible by absolute savings only. All specific needs must be subjected to a thorough analysis, particularly in regard to products whose manufacture requires a great deal of energy and which cannot be permitted price increases. It will be necessary to review individual production sectors and to establish material ties to fuel and energy conservation. For these reasons, the draft of the plan must already set the conservation targets and in some instances the plan of technical development must formulate the tasks which will completely cope with the required outputs. Since there are no substantial reserves to be found in power generating processes and distribution, the conservation possibilities must be explored primarily in technological processes, production innovation and minimization of consumption. This underlines the importance of rationalization commissions which are to be set up in all plants under the guidance of deputy managers in charge of operations and whose membership will include also technologists, design engineers, research workers and representatives of those departments which can affect fuel and energy consumption. In our ministry, the chemical industry accounts for 65 percent of fuel and energy consumption. A comprehensive look at individual VHJ gives an idea of the total consumption by the chemical industry. Consumption per million Kcs of production is as follows: 209 tmp in Chemopetrol, 111 tmp in Unichem, 155 tmp in the paper and pulp industry and 48 tmp in CZGP [Czechoslovak Rubber and Plastics Industries]. The specified values of minimal savings correspond to the absolute fuel and energy consumption.

We ask Chemopetrol, for example, to reduce relative consumption by 2.2 percent or approximately 100,000 tmp per year. On the other hand, VHJ of the printing industry, VHJ manufacturing small leather items and VHJ of the garment industry consume only 10,000 tmp per year.

Although such fuel and energy conservation will not be an easy task, it is the only way we can achieve the anticipated economic development. We cannot expect that prescribed limits will be raised and so we must be prepared for a radical reduction of consumption because even the new orientation of the power sector to the development of unconventional production of energy is not the solution. Also the investment of more than Kcs 10 million per MW in the nuclear power plants underlines the importance of energy conservation and its social necessity for further development.

We import full 39 percent of the energy consumed in our state. Industry accounts for 37 percent of consumption, the population and the tertiary sphere for 26 percent, agriculture and transportation for 7 percent, and the remainder are the losses incurred in conversion and distribution. In other words, this means that the entire burden is borne by industry which must cope with the imbalance in the fuel-power supply.

As a consumer of fuels and energy, the chemical industry is not negligible. Its consumption accounts for approximately 24 percent of all industrial consumption in the state.

For these reasons, the industrial sectors consuming large amounts of energy must comply with the so-called state target program of fuel and energy consumption and the chemical industry also must play its part in these efforts. In accordance with the state plan, our goal is to reduce energy consumption from 90 tmp per million Kcs of production in 1980 to 81 tmp by 1985. This means that standard consumption must be absolutely reduced 10 percent on the average in the entire sector.

Objectives of Fuel and Energy Conservation

The analyses reveal that approximately 65-70 percent of the conservation volume is achieved by technological measures and energy experts and technologists must, therefore, concentrate their attention on technological consumption. On the other hand, savings in power-generating processes and conversion are achieved at extraordinary high costs. While the reduction of consumption by 1 tmp requires an investment of Kcs 15,000 and more in replacement of a boiler, the same savings can be achieved in technology at the cost of Kcs 6,000-8,000 and at as little as Kcs 800-1,000, when secondary resources are utilized.

We must, therefore, pay foremost attention to instances in which the highest possible economic effect can be achieved. The examination of secondary sources of energy has revealed that in the chemical industry at the present time we do not make proper use of:

--100,000 tmp in waste fuels and

--20,000 tmp in waste heat.

It is, therefore, commendable that the enterprises paid attention to this problem in 1979 and that the savings in the utilization of secondary energy resources amounted to 70,000 tmp in 1979, which was 22 percent of the savings achieved by the entire sector in that year.

Among the major projects in this area, we must mention the following:

--a boiler using waste heat in the CHZ CSSP [Czechoslovak-Soviet Friendship Chemical Industries] Litvinov;

--an industrial-waste incinerator in the same plant;

--use of reheated water in the Steti SEPAP [North Bohemian Paper Mills];

--use of waste heat from ammonia production in the Litvinov CHZ CSSP;

--regulation of technological systems at Spolana Neratovice.

The correct way was demonstrated by Spolana Neratovice, which by successful cooperation between enterprise technologists and energy experts and workers of the SEI [State Power Inspectorate], achieved savings in production of caprolactam, vinyl chloride and electrolysis of fuel and energy. These savings were awarded the first prize in the statewide competition in fuel and energy conservation in 1979.

A similar combined brigade of labor will be used also in the Steti SEPAP and should also be organized in other instances.

It is definitely worth considering specifying the optimum consumption in the production of demanding products such as ammonia--2.17 tmp per ton, methanol--2.8 tmp per ton, and pulp, paper, rubber and others. The 10 products most expensive in terms of energy consumption account for 26 percent of all consumption in our sector and 41 percent of consumption in the chemical industry. These values confirm again that extraordinary attention must be paid to these products, which in terms of energy consumption are the most expensive products, as well as to the finished products and their exports.

The chemical industry, including crude-oil processing, exports approximately 882,000 tmp in its products. Moreover, its exports increased 40 percent, while the price of energy increased only 3 percent in the last 5 years. The pulp and paper industry, however, shows a different ratio: while it exported 160,000 tmp in its products, the 40 percent increase in its exports necessitated a 30 percent increase in use of exported fuel in the last 5 years.

These indicators point to the potential increase in the national income with reduced energy consumption, but at advantageous prices and with good selection of finished products. This calculation would be even more interesting for individual products. Closely related to this evaluation are the considerations underlying the long-term plans such as conception of exports of so-called qualified small-tonnage chemical products and imports of, in terms of energy consumption, expensive products which could be obtained only through joint investment projects at the sources of fuels and raw materials such as the Soviet Union.

Another reason for high energy consumption is indirectly the relatively ineffective utilization of existing capital assets and production capacities and the low rate of closing down obsolete productions.

This problem must be dealt with by the most prominent economic workers, whose interest must not be confined to extensive development and new capital investment. The preparation of conservation programs with the new scientific approach to the solution of existing problems will necessitate assigning new research tasks.

It has recently been found that only an insignificant number of projects in technical research focuses on fuel and energy conservation, and moreover there is no restraint to demand these projects and to assign them according to the plan. It will also be necessary to set aside a special group of workers in the design centers or research institutes for so-called technical consultation in the area of fuel and energy conservation as well as for providing so-called "engineering" which by technical and technological review will discover the possibilities of conservation and suggest specific economy measures. The economic sphere must also play an important part if the total value of fuels and energy consumed and reflected in the total production costs of the enterprise is to be closely watched from the economic standpoint. This economic approach must be backed up by the wider application of premiums, based on competition, for fuel and energy conservation, goal-oriented bonuses, topical tasks and so on.

A very important area also is the introduction of semiconductors which are used primarily in the paper industry according to the plan.

The elimination fo serious defects, such as escape of steam into the condensate, defective insulation of pipes, shortcomings in the utilization of expansion heat of the condensate of heat "regulation" by opening of windows or superfluous lighting cannot be included in conservation. Conservation must be based on scientific studies, innovation of technological processes and their automation, application of new achievements in top-quality equipment, and so on. We must prepare programs for the utilization of low-potential heat in heat pumps, for systematic utilization of all waste fuels and heat, for automation of all heating systems, for utilization of air temperature in ventilation and drying, for controlling of processes by computers, and so on.

In designing new operations and plants we must pay consistent attention, at all stages of design documentation, to expert opinion on investment projects. Technological solutions must be evaluated from the standpoint of energy consumption and several variants must be presented for overall evaluation. We cannot afford to construct new plants with higher standard consumption than at present nor can we benevolently overlook the fact that the contractor did not observe the parameters specified for energy consumption.

In conclusion I would like to emphasize that we are aware of the difficulties in the solution of energy problems faced by our chemical industry in the period of the Seventh Five-Year Plan, and for this reason we deem it necessary to enlist for their solution the full su-port of the organization and the wide participation of technological, investment and design departments as well as the department of technical development. However, it is the energy department which must be the motive force in the enactment of conservation measures and in the determination of goals. The energy department must make use of the large body of workers in order to optimize energy consumption everywhere and to achieve, by these savings, a continuous and smooth operation in chemical production according to the plan.

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AGRICULTURAL PROBLEMS IN CSSR DISCUSSED

Bratislava ROLNICKE NOVINY in Slovak 4 Feb 81 p 4

[Interview with Julius Varga, director of the Agricultural Department of the CPCZ Central Committee, by Vladimir Fapso: "To Raise the Atmosphere of Initiative to a Higher Level"]

[Text] The Sixth Five-Year Plan meant an unusually demanding period for our agriculture and nutrition, not only in terms of tasks stemming from the main strategic line of our party's agricultural policy stipulated by the 15th CPCZ Congress, in other words, from the plan to make our country more self-sufficient in food production and at the same time to meet the growing food consumption and provide more rationale nutrition, but also in terms of the conditions that determine our agricultural production. Here we refer to the weather--it is fair to say that the last 3 years of the Sixth Five-Year Plan deviated from the norm--as well as to the intricate foreign-trade conditions complicating imports of certain essential goods, such as high-protein fodder, agrochemicals as well as special technology, some of which we must purchase in capitalist markets. We discussed the last five-year plan and the prospects for the Seventh Five-Year Plan with Julius Varga, director of the Agricultural Department of the CPCZ Central Committee.

[Question] We were able to raise our agricultural production by about 10 percent. Can it be regarded as a partial success for the Sixth Five-Year Plan?

[Answer] Well, one must keep in mind that the increase stipulated in the plan could not be achieved and that the rate of growth is below the rate achieved during the Fifth Five-Year Plan. Unfortunately, our agriculturists met the plan for plant production only 92 percent. Thus, it progressed at a slower rate than livestock production. In effect, we may feel satisfaction only with the development of oil-producing crops and to some extent, of grain crops, although we failed to achieve the indicators stipulated in the plan. In addition, we achieved some improvement in the production of bulk fodder, especially in the past 2 years. Nevertheless, we cannot feel complacent about the results in the production of potatoes, sugar beets and other technological crops, including hops.

[Question] We cannot place all the blame for this qualified success, can we?

[Answer] The results in plant production were also affected by shortcomings of a subjective character--starting with the cultivation and exploitation of the soil, through agrotechnological deficiencies, up to the organization of the harvest and the subsequent treatment of the harvested crops during which far from negligible waste occurred, as was stressed at the 18th session of the CPCZ Central Committee. Moreover, we cannot be pleased with the slow practical application of scientific and technological achievements in our agriculture. The situation in livestock production appears slightly more favorable. Our agriculturists fulfilled their plan for the Sixth Five-Year Plan almost 99 percent. Above all, milk production was up--and what is particularly significant--primarily by higher productivity, which increased from 2,800 liters in 1975 to 3,070 litres last year. Furthermore, meat production was up from 1,593,000 tons in 1975 to 1,844,000 tons last year, but most of all, the production of slaughter hogs rose from 737,000 tons to 902,000 tons, and poultry production from 178,000 tons to 245,000 tons, although the import of fodder was restricted. Production of cattle for slaughter practically stagnated--640,000 tons were procured in 1975 as compared with 668,000 tons last year. Despite some advances, certain reserves remain in livestock production. Next to a low productivity rate in cattle raising, the mortality rate of both young grown animals in fattening stations has been high, which means, of course, emergency slaughter. For example, 5.5 percent of newborn and 7 percent of weaned calves died last year. Shortcomings are also rampant in the upgrading and use of fodder, although last year some improvement could be noted in the statewide average as confirmed by the continuous per-unit consumption which continues to differ in individual years and in individual districts.

Less advantageous results have been achieved in production, but the escalating prices of contributions adversely affected the economic situation and pensions in agricultural enterprises in comparison with the preceding five-year plan. While in the Fifth Five-Year Plan profitability of production, i.e., the ratio of profits to total costs, amounted to 15.5 percent in unified agricultural cooperatives and to 2 percent in state farms, in 1976-1979 it was 9.3 percent for unified agricultural cooperatives and only 3 percent for state farms. Thus far we have not been informed about last year's achievements.

[Question] How has our food industry developed in relation to agricultural production?

[Answer] We achieved a considerable increase of production over the Fifth Five-Year Plan, however, due to shortages of raw materials and partly because of declining interest in alcoholic beverages and cigarettes, the plan was fulfilled only 97.3 percent and deliveries to consumer goods inventory, 98.9 percent. A major shortfall was evident particularly in sugar production, which was fulfilled at only 89 percent of the plan. An improved selection of products is a positive phenomenon. In the Sixth Five-Year Plan, our food industry enriched the market with more than 1,400 new types of products, most of which involved only some modification; about one-sixth of the new products represented qualitative changes. We noted certain improvements in quality, although about 10 percent of the products of our food industry failed to meet the standard of quality.

Despite the complex conditions and particularly because of the good harvest of grain and oil-producing crops and generally also fodder and certain kinds of fruit, we reached the highest volume of production in all of our agricultural history, namely, Kcs 84.6 billion, which is Kcs 4.9 billion, or 6.2 percent more than the average in the preceding 4 years. Our grain growers produced the second best harvest in our history--10.74 million tons or 4.16 tons per hectare. We failed to meet the planned harvest of 11 million tons because all areas had not been cultivated according to the plan and because certain crops in mountainous areas failed to mature. Our potato growers fulfilled their plan of production only 69.5 percent, and sugar beet growers, 86.5 percent.

In livestock production, our agriculturists met every basic indicator for market production--slight shortfalls in the production of slaughter cattle and calves were balanced by hog procurement, which was above the plan. The food production plan was fulfilled 99.3 percent, which is above the average for the preceding years of the Sixth Five-Year Plan. Deliveries of food products to our domestic market were met at 98.7 percent.

[Question] What are the prospects for the current year which is the first year of the Seventh Five-Year Plan?

[Answer] Good preconditions for this year have been set as concerns the stock of farm animals, although particularly in beef-cattle raising the age and weight distribution of the livestock is not quite what one would desire, and the situation of the fodder base is not the best. Despite a relatively good harvest of grain crops, the situation with grain fodder is unsatisfactory due to restrictions on potential imports, and in certain areas even the quality of bulk fodder failed to reach a desirable level.

As for our plant production, the inclement weather in the autumn prevented the sowing of crops on the planned acreage and thus a shortfall of 65,000 hectares must be made up by the spring crops. In certain areas, especially in eastern Slovakia, their growth has been adversely affected by flooding. For that reason, tasks must be consistently fulfilled right from the beginning of this year. That will not be so simple because of--or despite--the fact that these tasks are realistic, as are the tasks of the Seventh Five-Year Plan, and correspond with the development during the Sixth Five-Year Plan and with the conditions created in the supply of materials and technology. These tasks are very demanding because certain changes considered in the structure of production for the 1981-1985 period must be implemented as early as this year. This year we must begin to work systematically to advance the growth rate in plant production over livestock production as the basic precondition for the fulfillment of our policy which calls for increasing our self-sufficiency in food production. Consequently, the plan stipulates a 7.9 percent increase in the volume of plant production over last year's harvest and a 5.5 percent increase in market production from the state funds over last year. From this it follows that a major emphasis is on a higher share of the intermediate product, especially on all types of fodder. It is envisioned that the grain harvest will yield 11.06 million tons, which is 320,000 tons more than in 1980, and that the production of bulk fodder will amount to 14.3 million tons, i.e., 3.6 percent more than last year.

In our situation, we cannot count with any further expansion of cultivated areas for grain and fodder production and thus, we must raise their production by further intensifying cultivation. In terms of grain crops, this calls mostly for further improvement of the species and particularly of the variety structure, nutrition and agrotechnology, for cutting waste during harvest and processing operations, and naturally, for the achievement of the highest possible yields per hectare. As underlined at the 13th session of the CPCZ Central Committee, in terms of bulk fodder this most of all involves the greatest possible expansion of the acreage for multiannual fodder crops producing the highest yield and the best quality with the highest protein content. Furthermore, more corn for silage and more intermediate crops must be cultivated to bring their constant share in the acreage of arable lands up to 10 or 12 percent. At the same time, their generic structure must be upgraded. Utilization of permanent grasslands must be promoted this year because, as has been stressed on numerous occasions, they represent one of the most extensive reserves in our agriculture. Beginning with the coming spring season we must begin implementing more systematically the meadow and pasture program planned in nearly every agricultural enterprise in the hillside and mountainous areas, and pay special attention to the organization of the harvest during which considerable waste still occurs both in terms of quantity and quality. The standards of conservation and storage of all types of fodder must be upgraded. More top-quality hay must be produced in agreement with the demands of cattle farming because, in view of the energy situation, we cannot expect any expansion in the production of hay dried with hot air.

[Question] What other factors should be considered?

[Answer] The cultivation of leguminous plants, particularly for fodder funds where they must replace imported components. While we procured 62,000 tons of legumes in 1979, that amount escalated last year to 82,000 tons and this year 147,000 tons are needed. As compared with 1980, the plan for production of sugar beets has been considerably modified. The target is a yield of 8.2 million tons as compared with 7.2 million tons in 1980. The planned yield of potatoes is 3.75 million tons, while the 1980 plan called for 3.9 million tons. During the spring season, both those tasks must be approached with the experience gained in recent years and with particular care because the yield planned for 1981, for instance, in sugar beet production has been reached only once before, in 1977. It exceeds the average yield of the Sixth Five-Year Plan by almost 16 pertent. Steps have been taken to obtain appropriate seed not only from our own resources but also from imports in order to meet the tasks in sugar beet production. However, starting with sowing, the determining factor will be systematic satisfaction of the high demands of this crop on agrotechnology and fertilization and most of all, planting an appropriate number of seedlings per specific unit of land. The struggle against harvest-time waste must be emphasized even more than last autumn. The premise in agrotechnology and fertilization is to produce not only tons of beets but most of all, tons of sugar. The Jampol-Prostejov movement which aims at that goal will be further developed.

The situation in potato production will be quite complicated. As a matter of fact, the condition of the seed is unsatisfactory, and therefore it must be treated with care and everything must be done to use it to the best advantage and to maintain the acreage for planting. Following last year's experience, our ministries of agriculture and nutrition must promptly deliver the required amount of agrochemicals, protective agents against potato diseases, and pesticides. The plan for vegetable and fruit production will be expanded in comparison with last year's harvest and with the average for the preceding five-year plan. To fulfill this task, vegetable cultivation must be more concentrated and at the same time, its generic structure improved in agreement with the demands of the market and above all, of the canning industry. For that purpose trade and processing organizations must promptly procure all the harvested vegetables and fruit.

As underscored at the 13th session of the CPCZ Central Committee, the essential precondition for the fulfillment of the tasks in plant production involves comprehensive exploitation of the soil fund. This must be reflected not only in cultivation and sowing but also throughout the subsequent vegetation season, so much more because, as a preliminary inventory has shown, we must count on the fact that we shall have 645,000 hectares of agricultural lands and 29,000 hectares of arable lands less than stipulated in the original directives of the 1981 plan.

[Question] Does livestock production count on a further increase in milk production?

[Answer] The target for milk production is 5.78 million litres and for market production, 5.22 million litres, i.e., 2.4 percent more than last year, to be achieved not only by moderately increasing the stock by 10,000 milch cows but also by enhanced productivity which will amount to 3,085 litres. Production and procurement of cattle for slaughter is up 2.2 percent, however, procurement of hogs for slaughter will drop 6 percent and procurement of poultry for slaughter, 5 percent. Egg production and procurement is planned to remain on the same level as last year. On the basis of these indicators it is assumed that this year the total volume of livestock production will amount to Kcs 60 billion more than in 1980. Thus, livestock production will account for roughly 56 percent of all economic production as compared with 58 percent in 1980, while the share of plant production will be up 42 percent to 44 percent over last year. The level planned for livestock production will make it possible to maintain the consumption of meat and meat products at 85 kg per citizen and to raise the consumption of other products of animal origin, especially milk and dairy products. In order to fulfill the tasks in livestock production despite high production of grain crops, allocations for grain from the central fund must be increased 500,000 tons so as to balance the fodder supply and, furthermore, additional grain must be released from federal material reserves and augmented with additional imports from the nonsocialist countries. Nevertheless, we must be scrupulously economical with grain fodder, and above all, we must not permit any excesses in their consumption because further increases cannot be covered from central funds. For that reason, the Federal Ministry of Agriculture and Nutrition issued in December 1980 two basic directives, namely, "Mandatory System of Creation, Release and Inventory of Grain Funds for the Seventh Five-Year Plan" and "Mandatory System of Management and Use of Fodder in 1981." A very important measure, consistent regulation of the production of hogs and poultry for slaughter, has not been sufficiently implemented particularly in poultry farms. The production plan has been overfulfilled to such an extent that supply exceeded demand and chickens for slaughter stockpiled. Just as much attention must be focused on the process of replacement not only in cattle raising where we are interested above all in expanding the stock which will determine the future development in this vital branch of livestock production, but also in raising hogs and other types of livestock. After all, this improves the quality in the process of replacement and provides preconditions for enhancing its efficiency and raising its productivity.

[Question] What kind of tasks are facing our food industry?

[Answer] In conjunction with supplies of raw materials, production will be increased 1.8 percent over 1980 and deliveries to market funds in retail prices 3.2 percent. This calls for more efficient utilization and exploitation of raw materials in every branch of our food industry, especially in the meat industry which has already made some advances in this direction; both the concept and some specific measures were outlined for utilization and nontraditional raw materials, including the necessary imported technology. We must try especially hard to cut down our sugar consumption since the sugar balance is unfavorable because of the shortfall last year. We must work harder to update the line of products, to profit more from the potential of licensed production, and to continue developing the production of convenience food where baby food and children's and diabetic nutrition have priority. Our food industry must get more raw materials from our agriculture.

[Question] What will be the volume of material-technological and capital investments?

[Answer] Deliveries of fertilizers will amount to 257 kg of pure nutriment per hectare of agricultural land, i.e., 0.8 percent more than last year. However, deliveries of chemicals for plant protection will require more attention due to structural gaps and because last year's experience has shown that the necessary chemicals must be promptly delivered and applied.

In agreement with the decisions of the 18th session of the CPCZ Central Committee, the dynamism of investments will decelerate this year and through the entire five-year period, and the rate of building projects under construction will be reduced. Therefore, more demands must be imposed on capital investment and its efficiency must be improved, ways to cut the cost of every capacity unit must be sought, the use of standard and model projects must be expeditiously enforced, and existing buildings must be reconstructed and modernized. Because of lower funds, it is particularly important to pinpoint our priorities not only in agricultural capital investment but also in our food industry. Investment funds will be targeted in our agricultural capital investment most of all at expanded plant production, at the construction of 11,700 hectares of irrigation systems and 45,700 hectares of drainage systems, construction of postharvest lines and storage for grain and potatoes, construction of stations for treating and mixing fodder, repair shops and diagnostic centers, and building of facilities for the development of fruit and vegetable production. Capacity construction projects for livestock production will be built at a slower pace; facilities will be built to house 282,000 milking cows, which is not negligible since this represents nearly 15 percent of the current stock. Moreover, facilities will be built for 400,000 head of other beef cattle, 62,000 hogs and 590,000 other swine, 150,000 sheep and nearly 8 million head of poultry. The capital investment plan for our food industry is focused mainly on the expansion of large-scale production capacities which are now incessantly plagued by various processing problems. This concerns primarily enterprises processing raw materials of animal origin, canning and deep-freezing industries and production of nonalcoholic beverages.

The principle of systematically improving efficiency of production applies not only to our food production but to all of our agriculture. We must proceed systematically in reviewing the growth of labor productivity, utilization of all products, processing of raw materials, and we must struggle against waste, beginning with primary production, through the processing industry, up to the turnover of food products, and naturally, conservation of grain fodder. All of us must strive to make our agricultural production richer and more efficient, and if we succeed in that in the first year of the Seventh Five-Year Plan, we shall come closer to victory and finish the course honorably, as winners. Our fathers' words of wisdom still apply--we must not postpone until tomorrow anything that can be done today. Therefore, it is twice as important today to step up the initiative of our workers in the agriculture and food industry from the very first days of the Seventh Five-Year Plan and to develop socialist competition and the pledge movement in order to fulfill the Seventh Five-Year Plan successfully.

9004
CSO: 2400

CZECHOSLOVAKIA

BRIEFS

AGRICULTURAL DELEGATION TO HANOI--A delegation of the Cooperative Farmers' Union Central Committee led by Deputy Chairman Eng. Bretislav Varecka left Prague for Hanoi on 24 March. The delegation will meet with representatives of the Vietnamese agricultural production cooperatives on possibility of increasing mutual cooperation and also will visit Vietnamese agricultural cooperatives. [Bratislava ROLNICKE NOVINY in Slovak 25 Mar 81 p 1]

CSO: 2400

TRADE DEVELOPMENT, FAIR PARTICIPATION IN LIBYA OUTLINED

Valletta THE JAMAHIRIYA MAIL in English 7 Mar 81 p 3

[Unattributed article: "GDR Participation in 19th T.I.F."]

[Text]

WITH its regular participation in each Fair held since the September Revolution of 1969 the GDR confirms both the great importance attached by it to this trade meeting in the Libyan capital and its wish for further extension of economic relations with the Socialist People's Libyan Arab Jamahariya with which we have so many interests in common

Numerous examples give proof of the positive results of our hitherto co-operation. These include, among other things, the space master planetarium erected and equipped in Tripoli by Europe's leading manufacturers of optical instruments, VEB Carl Zeiss Jena, the contracts concluded on the erection of large silos for grain storing in Derna and Beida, the special-line shop for ophthalmic optics established in Benghazi as well as the cargo vessels from GDR shipyards.

The close economic relationship between our two countries is essentially encouraged by the activities of the joint commission GDR/SPLAJ which determines concrete measures to extend co-operation, particular in the fields of industry, agriculture, public health, education and foreign trade. The 4th session of the joint commission which took place in February 1981 in the capital of the GDR agreed further important measures upon the efficient co-operation between the two countries.

This positive development of our relationship lays the foundations of a successful Fair participation of the GDR.

Eleven foreign trade enterprises safeguarding the export interests of numerous efficient industrial enterprises, are presenting at the Fair complete installations and equipment, machines and devices of high technological standard. All exhibits have been carefully selected in compliance with the needs of the Jamahiriya's national economy and its investment projects.

EXHIBITS

From the multitude of exhibits only a few shall be mentioned here, for example, the model of a textbook printing office for which POLYGRAPH-PROJEKT undertakes the design, supply and erection, products of the electrotechnical industries, testing laboratories designed as training workplaces, optical precision instruments from VEB Carl Zeiss Jena, the model of a cement grinding mill, ROBOTRON computing, typewriting and drawing equipment, agricultural implements and installations such as the model of a state-owned farm, as well as consumer goods from various branches of industry, such as electrical household appliances, glass and porcellain, and textiles.

INSTALLATIONS

As an exporter of complete installations and equipment the German Democratic Republic is prepared to undertake the supply of such goods which are conducive to a rapid building-up of the Jamahiriya's national economy. This applies, among other things, to cement mills, cable factories and rolling mills, signalling and safety devices for the railway system, rail vehicles, port equipment, conveying machinery, large-scale installations and machines for agriculture, electrotechnical equipment, electronic computing and data processing equipment and many other products from the capable GDR industry.

It goes without saying that we can show here only a section of the wide supply range of our industry. But all parties of the wide supply range of our industry interested may obtain a comprehensive survey during the Leipzig Fairs and one can note that year by year the SPLAJ is represented there with convincing displays and many visitors.

The staff of the GDR's foreign trade and export industries who are present at the Tripoli International Fair, has got ready for busy commercial activities and is looking forward for your visit.

CSO: 2020

LONG-TERM CONVERSION, CONSERVATION TO SOLVE COAL SUPPLY PROBLEMS

East Berlin NEUER WEG in German Vol 36 No 5, 1981 signed to press 25 Feb 81 pp 161-166

/Lead article by Horst Wambutt, chief, Department for Basic Materials Industry, SED Central Committee: "Make Wide Use of Brown Coal, Use Energy Efficiently"/

/Text/ The bezirk delegate conferences clearly reflected the largest initiative movement ever in the socialist competition in honor of the Tenth SED Congress. They demonstrated the total readiness of the working people to produce great achievements. The discussions also showed that more and more party organizations are wondering how more intensively to inspire the working people to conserve energy. Many delegates gave examples of communists who, together with their fellow workers, are endeavoring as innovators and rationalizers to find new approaches to energy conservation or the replacement of heating oil and hard coal by raw brown coal.

As a result of the resolute work of party organizations, based on Central Committee decisions, we have learned to appreciate that a secure and efficient fuel and energy supply is truly a vital question for the continuing dynamic growth of the economy and, therefore, the well-being of the people. We thus see the importance of always thoroughly explaining economic contexts to the working people and fully absorbing the party's economic strategy developed at the 11th, 12th and 13th Central Committee Plenums.

Changes in the Use of Energy Sources

The party organizations political arguments point out that the situation on the international markets and the actual conditions in our country compel us to fundamentally change the structure of our use of energy. Due to the oil shortage and steadily rising oil prices we can no longer use heating oil as a source of energy. This does not apply to us alone. All over the world heating oil is increasingly replaced by solid fuels. In future oil, that valuable raw material, will almost exclusively be processed by the chemical industry and serve as the base for the production of fibers, plastics, motor fuels and many other vitally necessary products.

However, even solid fuels such as hard coal are not available in the GDR in unlimited quantities, because all hard coal has to be imported. Its price also is rising and thus represents a burden on the economy. The problem has become even more acute because the long-term hard coal import contracts concluded with the People's

Republic of Poland--formerly carried out satisfactorily--are currently not being fulfilled as planned.

It follows that we must, as far as technically and technologically possible, replace heating oil and hard coal by brown coal, especially for the production of heat. Consequently brown coal's predominance as an energy source and raw material in the GDR is even more pronounced. Brown coal meets more than 60 percent of our primary energy needs; more than 80 percent of electricity is generated in brown coal fired power plants.

Great Importance of Raw Brown Coal Processing

The processing of raw brown coal assumes growing economic importance at the same time as the direct use of raw brown coal as a fuel. This development proceeds in two main directions. For one brown coal is converted more and more into refined energy sources, such as electricity, brown coal briquettes, gas, brown coal coke and pulverized fuel. For the other it is gaining in importance for the raw material base of the chemical industry by the production of carbide, synthetic gases and liquids derived from the low temperature carbonization and coking of brown coal. The carbochemical products obtained from brown coal are already a decisive raw material base for the chemical industry, corresponding to 7 million tons of oil.

We can and must adopt this approach for the long term. In the conditions prevailing in the GDR this is the most efficient way and an urgent economic requirement. Raw brown coal output will therefore be raised to a minimum of 300 million tons per annum. In order to realize this approach we will have to create about half the needed capacity from scratch, because our old strip mines are nearing exhaustion. Poorer geological and hydrological conditions involve a rise in development costs. Party organizations are therefore confronted with the duty to exert all their influence to see that brown coal is handled as sparingly as possible, because the costs of production are very high and resources limited.

Producing More With Less Energy

Party organizations and kreis managements will therefore be well advised in their politico-ideological work to give priority to the struggle for the most rational use of every energy source and emphasize that energy conservation measures are always cheaper than the analogous expansion of energy production capacities. In 1980 many enterprises demonstrated that output can be significantly raised with less energy use. The national income rose by 4.2 percent and industrial goods production by 4.7 percent despite a 1.2 percent absolute decline in primary energy consumption.

To consolidate and further extend these successes the party organizations will have to develop a solid combat position based on thorough scientific-technological and resolute organizational efforts. That is the only way completely to do away with all phenomena of waste and reservations to the use of brown coal while appropriately dealing with the practical problems arising. While party organizations must resolutely champion energy conservation, they must also proceed against excesses, especially in areas where the standards fixed for the public supply fail to be observed. At the same time the technological and technical changes involved in the conversion to brown coal must be carefully prepared, exactly decided and discussed with all those affected.

All this requires definite ideological efforts, concrete arguments and high purpose from the party organizations. Good experiences are yielded wherever actual examples serve to prove that heat production from brown coal is the most efficient. Already specific fuel costs per thermal unit in comparable facilities are 4 times higher for heating oil than for brown coal. On several occasions an exchange of experiences with the best has been found rewarding, and so has the study of advanced working methods. This ensures that the best scientific-technological methods are quickly utilized in all spheres of responsibility.

The kreis party organization in the VEB Leuna-Werke Walter Ulbricht provided a criterion for rational energy use. In 1980 this combine achieved a 7.2 percent growth in output despite a 4.8 percent reduction in energy use. Advanced targets have also been fixed for the future. The Leuna experience should serve as an example and help generalize this type of party work.

The Responsibility of Every Single Communist

To begin with the kreis party organization's politico-ideological work carefully elaborated the economic importance of rational energy use--based on Central Committee decisions--and emphasized the immense responsibility of every communist and his attitude to this vital question with regard to the continuing successful implementation of our policy. The kreis management directed the party organizations to conduct the political work with the masses in a manner relevant to the respective jobs and the specific purpose. The collectives were given oral and written suggestions about the possibilities for conserving energy and where to find available reserves. At the same time they were set a utilization norm to be achieved. This procedure challenged energy conscious thought and action as well as morally and materially stimulating the workers. Energy innovators and rationalizers are now known and respected in the entire Leuna combine. Atittudes and behavior developed in the course of this politico-ideological work, which resulted in the search, for, discovery and implementation of more and more ways to ensure the most rational energy use.

Detailed Programs of Energy Conservation

Secondly the general director, the directors and section managers, foremen and brigade leaders are entirely conscious of their personal responsibility for rational energy use. Detailed programs of energy conservation were worked out for the various facilities and sections. They are based on scientific-technological process analyses, new technological and organizational methods, the optimalization of the operation of facilities and machines as well as the fixing of consumption norms. On principle not a single source of energy consumption is disregarded, whether it is a matter of steam generation or consumption, the utilization of waste heat or lighting. Each item is studied with a view to finding out how to reduce energy consumption while maintaining plan fulfilment and further improve working and living conditions.

In Leuna energy issues are not a matter for the special concern of energy managers alone. All departments are involved in the approach to energy conservation, beginning with science, technique and technology, and ranging through the development of of the construction of rationalization aids. This makes it possible to use the potential of the combine to carry out the suggestions and proposals drafted.

Thirdly the party organizations make sure that rational energy use is a solid element in the socialist competition directed by the labor union organizations. The competition is conducted concretely, openly and accountably, on the basis of scientific-technologically justified energy consumption norms which are constantly raised to the most advanced standard. The results of conservation as well as any deviation from the norms are accounted for in marks and pfennigs at the end of each shift. This makes it possible more relevantly to conduct the competition between shifts and brigades. Such titles as "best stoker" or "best furnace operator" are much appreciated.

Obviously the innovator system is flourishing in this kind of atmosphere. It is certainly not by accident that 40 percent of 1980 energy conservation were organized by innovators and rationalizers. The party organizations encourage this development by party targets and strict party supervision.

Replacing Hard Coal by Brown Coal

Politically responsible and prudent work is also required for the conversion from hard coal to domestic solid fuels. Here again it is necessary for the party organization to explain the economic necessities requiring this substitution, all the more because the most rational solutions often need the adoption of virtual chains of replacement in order to free energy sources. All possibilities for directly replacing hard coal with raw brown coal should therefore receive specially careful study, because this method is the most effective.

As a rule, however, hard coal will be conserved mainly by the use of brown coal briquettes or brown coal high-temperature coke. Mixed operations often also yield the desired result. We already have many examples of this type of success. At the moment, for example, the Breitungen thermal power plant is being converted to the use of briquettes. This will free 90 kilotons per annum of selected hard coal.

To Study and Apply Good Experiences

As, however, the capacities of our briquette plants are limited, we must find ways and means to exchange briquettes for raw brown coal. We have learned that, in general, briquettes lend themselves better than hard coal to direct replacement by raw brown coal or screened coal. Many outstanding examples for the freeing of brown coal briquettes by raw brown coal were organized last year with the leadership of the party organization. The direct use of raw brown coal for 6.5 tons per hour steam generators in the Rudisleben VEB Chemieanlagenbau, for sectional boilers in the Baalsdorf LPG or vibrating thrust grating furnaces in the Teltow Horticultural Production Cooperative Immergruen should inspire all managers and party organizers to study these experiences in order to increase their own efforts for conversion to raw coal. About a million tons of brown coal briquettes may be saved in the GDR by the application of the Rudisleben experiences in comparable boiler installations.

All this underlines the statement by the 13th SED Central Committee Plenum that, for the future, brown coal more or less alone will be available for GDR energy production. It also means that we will have to use brown coal instead of heating oil. This structural change presents a challenge to the political leadership of the party

party organization, calls for rigorous management and planning and creative scientific-technological work. The process of conversion must be organized consistently but gradually and without disrupting the economy.

Replacing Heating Oil by Our Own Efforts

To act responsibly therefore means that the party organizations in enterprises which, according to the state plan, are to construct brown coal fired boilers or convert oil fired boilers to brown coal, must exercise strict party supervision of all preparatory and implementing measures in order to ensure the punctual, if possible early, completion. Especially enterprises and facilities of machine construction, electrical engineering/electronics and construction are charged with responsible tasks.

The greatest progress with regard to rational energy use is achieved wherever party organizations deepen the readiness to encourage the replacement of heating oil by more enterprise creative solutions instead of waiting for new brown coal fired boilers. The replacement of heating oil is to be ensured by enterprise resources and labor, especially where smaller boiler installations are operating. This was achieved in an exemplary fashion by the Leipzig VEB Dampfautomat, the VEB Waesche-Union/Betriebsteil Frankenberg and the Leipzig VEB Energiekombinat. In these enterprise oil-fired boilers with an output of 0.8, 3.2 and 6.5 tons per hour steam respectively were so reconstructed as to produce nearly the same volume of heat with briquette dust or brown coal dust.

Observance and Lowering of Consumption Norms

Party organizations in enterprises which temporarily still need to use fuel oil for the generation of heat carry a great deal of responsibility. In these enterprises it is imperative to orient to the greatest possible conservation effort by the observance and lowering of consumption norms. At the same time it will be necessary to develop every opportunity for joint operation with steam generators on a brown coal basis. The Dresden energy combine, for example, was able by such measures to save 19 kilotons of heating oil in 1980. It should always be emphasized that every ton of heating oil used reduces the efficiency of social labor, because this fuel oil cannot be processed further into high-quality chemicals. The freeing of heating oil represents a crucial prerequisite for the greatest possible refinement of this valuable raw material.

The continuing purposeful fulfillment of the SED Central Committee decisions on safeguarding our fuel and energy supplies therefore represents a very complex task which challenges every party organization in every social sector.

11698
CSO: 2300

TITANIUM WHITE PRODUCTION DESCRIBED

Warsaw HORYZONTY TECHNIKI in Polish No 1, Jan 81 pp 3, 23, 24

[Article by Boguslaw Lempkowski: "Titanium White"]

[Excerpt] The flowline to produce titanium white at the Police chemical plants began operating in 1977. Currently this installation can supply 36,000 tons anually of this valuable raw material, worth about $1,500 per ton in world markets.

The titanium white plant in Police is a corporate part of a large chemical combine producing chemical fertilizers, which is absolutely untypical of the rest of the world; in general titanium white plants are independent factories. Polish titanium white is produced by the sulphate method based on technology under license from the West German firm Kronos-Titan GmbH (Figure 1). We obtain the raw material, ilmenite ore, from Norway via sea.

The Police installation permits 14 varieties of titanium white to be produced: 11 rutile varieties and 3 anatase varieties. For the anatase varieties, calcinate milling (with the proper additives) is the last step in the production process, but the production of the rutile varieties requires additional processing. For all 14 titanium white varieties, about 60 different substances are used during the production process to refine the surfaces. One of the purposes of refining is to prevent "chalking," which is based on releasing pigment particles from the coating substance (enamel, lacquer) which destroy the coating and decrease its life span. Organic substances (neopentyl glycol) as well as high-purity inorganic substances (for example, aluminum sulphate, soluble glass, soda lye) are used to surface treat the TiO_2 grains.

Protecting the Environment

One of the biggest disadvantages of the sulphate method for producing titanium white is that it generates a large volume of waste matter that is difficult to use. A special installation was constructed in Police to concentrate the post-hydrolytic sulfuric acid, which prevents poisoning of the waters of the Oder River at its mouth and, undoubtedly, the coasts of the Baltic Sea as well. Equipment produced by the Swiss Escher Wyss firm for technology developed by Polish chemists was purchased.

After hydrolysis, the sulfuric acid (concentration about 18 percent) is delivered to the concentrator plant (Figure 4). Such a concentration of H_2SO_4 causes very rapid corrosion. Even equipment made of acid-resistant steel becomes corroded within 10 days. Lowering the pressure turned out to be a more effective way. Currently, the acid-concentration process is carried out at 330-350°K and lowered pressure; under these conditions, corrosion occurs at the slowest rate. Eight crystallizer cells serve as the most efficient way of separating the ferric sulphate, which is very important relative to the future use of the acid. After passing through the evaporator, a 50-55 percent concentration acid is obtained which is then mixed with a 96 percent concentration H_2SO_4 obtained by the contact method. The resulting 65 percent concentration acid is delivered into the storage tanks and then used to dissolve phosphorites (preparation of phosphoric acid) in the production process for phosphatic fertilizers.

The separation of ferrous sulphate is very important in this installation. After the ferrous sulphate is crystallized in the sedimentation tank, it is removed in the form of the heptahydrate ($FeSO_4 . 7H_2O$), and the monohydrate ($FeSO_4H_2O$) which is dissolved in the acid is recovered with the aid of vacuum filters and returned to the concentration.

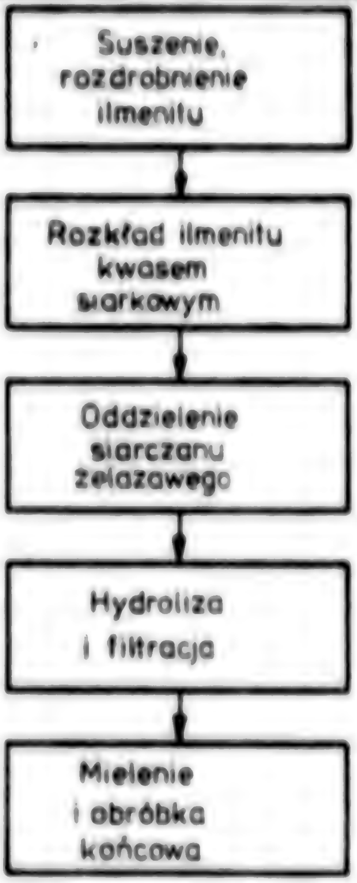
Because the posthydrolytic acid is concentrated, the purity of the Oder River's waters is protected. The price paid for this, however, is quite high. About 350,000 tons of H_2SO_4 are concentrated annually; the energy intensiveness of this process is so great that energy usage in the titanium white plant increased 100 percent from the moment the installation became operational. Thus, in this case the protection of the environment is very expensive.

Applications

Titanium white significantly improves the properties of other inorganic white pigments (zinc white, permanent white, lithopone), the fastness of colors (thanks to the stability of the titanium atom at the fourth stage of oxidation), the intensity of colors and the ability to cover painted areas (for 1 m^2 several times less titanium white is required than the remaining pigments). Because of this advantage, titanium white is used in many areas of industry.

The highest quality white enamels used in the auto industry to cover car bodies are obtained from titanium white. The addition of titanium white to other colored enamels increases their color intensity and improves the durability of coatings. The paper industry uses titanium white to obtain the best quality thin, white paper for dictionaries and encyclopedias. TiO_2 improves the brightness of paper, protects it against yellowing and improves the opacity of thin paper. In many tablets, the filling (massa tabulettae) is actually titanium white.

TiO_2 is relatively insensitive to temperature and chemical reactions, nontoxic, and capable of being broken up into very small grains, all very valuable properties in industry. The anatase varieties of titanium white are used in the synthetic fibers industry, including at least 94 percent of the grains less than 1 μm in diameter. In the artificial leather manufacturing process and in the rubber industry, titanium white is valued above all because with its aid the proper shades of white can be achieved for their products.

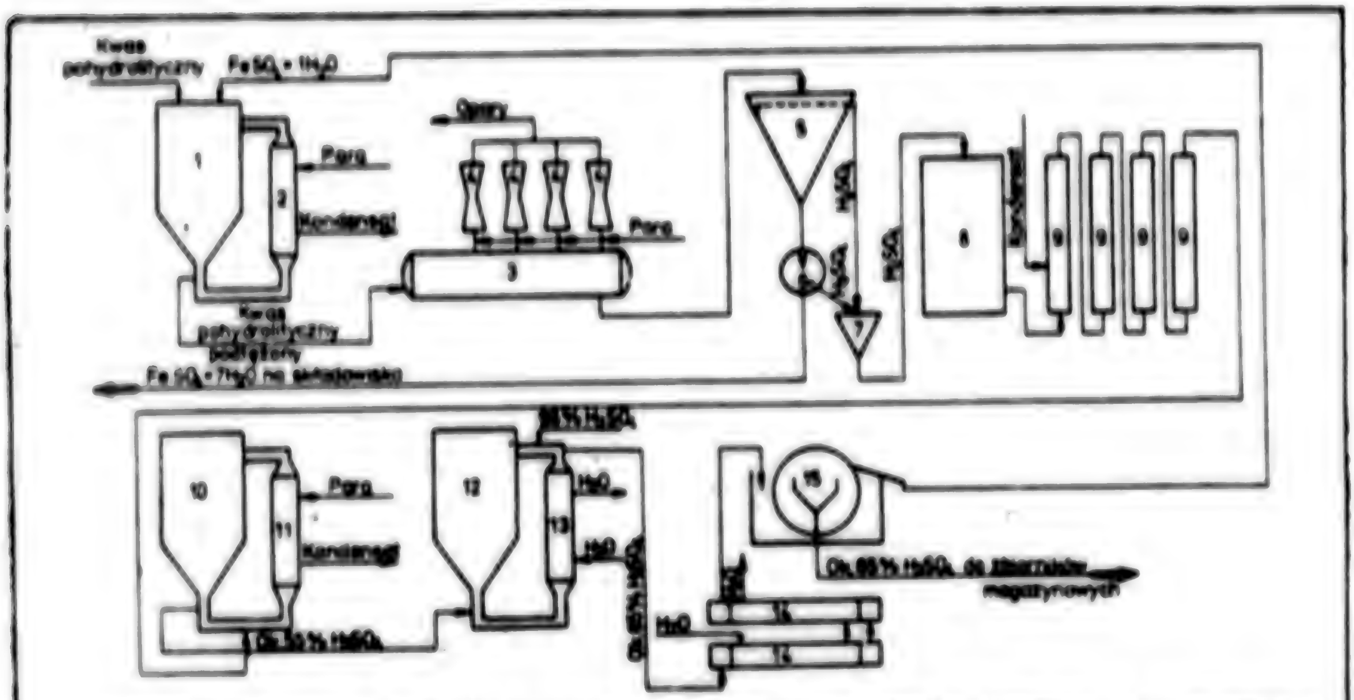

Suszenie, rozdrobnienie ilmenitu
Rozkład ilmenitu kwasem siarkowym
Oddzielenie siarczanu żelazowego
Hydroliza i filtracja
Mielenie i obróbka końcowa

Ryc. 1. Uproszczony schemat produkcji bieli tytanowej metodą siarczanową

Figure 1. Simplified diagram of titanium white production by the sulphate method.

Key:

1. **The drying and crushing of ilmenite**
2. **Decomposition of ilmenite by sulfuric acid**
3. **Separation of ferrous sulphate**
4. **Hydrolysis and filtration**
5. **Milling and final processing**


Kwas pohydrolityczny
FeSO4 · 1H2O
Opary
Para
Kondensat
Kwas pohydrolityczny podgrzany
FeSO4 · 7H2O na składowisko
H2SO4
Para
H2O
Ok. 55% H2SO4
Ok. 65% H2SO4 do zbiorników magazynowych
1
2
3
4
5
6
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Rys. 4. Schemat instalacji zatężalni kwasu pohydrolitycznego pracującej w Policach: 1 — mieszalnik, 2 — wymiennik ciepła, 3 — krystalizator, 4 — inżektory parowe, 5 — odstojnik soli, 6 — wirówka, 7 — zbiornik, 8 — zbiornik buforowy, 9 — podgrzewacz, 10 — wyparka, 11 — wymiennik ciepła, 12 — zatężacz, 13 — chłodnica, 14 — chłodnica kwasu, 15 — bębnowy filtr próżniowy

Figure 4. Diagram of posthydrolytic acid concentrator operating in Police

Key:

1. Mixer
2. Heat converter
3. Crystallizer
4. Vapor injectors
5. Salt dedimentation tank
6. Spin separator
7. Tank
8. Buffer tank
9. Preheater
10. Evaporator
11. Heat exchanger
12. Concentrator
13. Cooler
14. Acid cooler
15. Rotating vacuum filter
16. Posthydrolytic acid
17. Fumes
18. Steam
19. Condensate
20. Posthydrolytic acid fortified with $FeSO_4$ $7H_2$ O in stacking yard
21. About 55 percent H_2SO_4
22. About 65 percent H_2SO_4
23. About 65 percent H_2SO_4 to the storage tanks

Titanium white has found many important uses in the metallurgy industry, where a significant amount is used in the production of electrodes, alloys, nickel-titanium master alloys, and ceramic radio components. TiO_2 is not always used as a pigment. Its mechanical properties also play an important role.

11899
CSO: 2600

FARMERS CRITICIZE MEAT RATIONING INEQUITIES

Warsaw CHLOPSKA DROGA in Polish 17 Dec 80 pp 1, 4

[Article by a farm woman: "Meat Rationing Cards and What Is Next?"]

[Text] The meat rationing project announced 3 months ago has been submitted to public opinion. Rural residents have received it with legitimate concern.

Zdzislaw Mendrzak, a farmer from Wzdol-Kolonia, Kielce Province, who specializes in the raising of pigs: "As a specialist, I consider the proposed amount of meat and meat products to be inadequate. Maintaining a family and hard work in the fields demand a proper diet, and the proposed system of meat rationing does not guarantee that. I shall be forced to set aside more for myself and sell less to the State. In my case as a pig producer, it will be easier, because naturally not every pig is suitable for sale. On the other hand, my neighbors, who generally have not maintained any animals, already are beginning to buy livestock. I am counting on the fact that even after the introduction of meat rationing, we shall be able to purchase at least something. Up to now, we have not always had enough meat, and in traveling to the city to buy meat, we have always wasted a lot of time.

I shall try to be rather self-sufficient. There would still be the awareness, however, that the farmer continues to be treated as an inferior part of society, worse than state farm workers."

Wladyslaw Zaczek, a farmer-worker from Bodzentyn, Kielce Province: "As a worker, I must do my job as required, and in addition, work on my farm. Why should I receive only 1-1/2 kg of meat, when workers in other occupations receive between 3 and 5 kg? I am 60 years old and do not know what a vacation is, because I devote all my free time to my farm. Therefore, I feel that the proposal to give farmer-workers only half the regular allocation of meat is discriminatory.

I am a sheep farmer, and conditions on my farm do not permit me to raise pigs. I do not have enough land or coal, as I receive only 2 tons of coal from the State, although I sell the State 3 tons of grain. Why should I eat worse than before?"

Janusz Kowalski, director of the agricultural service in Bodzentyn gmina [rural parish]: "One cannot doubt that the proposed meat rationing program is disadvantageous to farmers. Furthermore, the program lacks the incentive to increase pig production. In our gmina, over half the farmer-workers do not raise pigs, because conditions are unfavorable. The difficult situation regarding feed and coal is well known.

And what about older persons whose production rate does not amount to 15,000 zlotys per year? There is talk that farmers will be able to sell their surplus meat on the open market after fulfilling the 1979 plan for pig sales. Who will be able to meet the 1979 production plan most easily? Obviously it will be those who delivered the least amount of meat to the State last year. This is an unfair and particularly unjust solution.

It is apparently necessary to exclude poultry and butter from the rationing system. The possibilities of home production and storage of meat products and lard on individual farms are minimal."

Krystyna Jasionowska, a farm woman from Wzdol-Wieczko, Kielce Province, who is active in the Rural Women's Circle: "If meat rationing is introduced, farmers should receive an equal quota with workers; otherwise, the farmer will have to set aside more for himself. As a result, fewer deliveries to the State will be made. As the price per kg of pork rose, so did the price of feed. In addition, the price of grain is going up next year. Once again, farmers have been wronged and discouraged from producing more pigs.

A similar situation exists with butter. If a farmer has not produced his own butter up to now, he certainly will have to do so. Because of a lack of freezers and processing devices, a lot of losses will take place. The State also will not receive as much milk as was previously the case."

"Farmers feel that in the current economic situation, the introduction of meat rationing on a temporary basis is necessary. They hope that rationing will guarantee the procurement of meat, because the shop supply in the rural areas and small towns is far from adequate. At the same time, they strongly question differentiation with regard to quotas. The farmers say only a fair distribution, which is the same for all segments of society, will meet with their approval.

In the opinion of rural inhabitants, the proposed meat rationing system does not provide the incentives to increase production. One way of encouraging greater pig production would be a percentage sale of meat from each sold pig.

Realization of the proposed framework for food allocation would be destructive to many farms. It seems that a renewed examination of the quotas for farm specialists, farmer-workers and older persons is required.

In the farmers' opinion, implementation of the introduced proposals will contribute not only to a reduction in animal breeding, but also to an increase in the home-processing of meat, lard and milk. The effect of this change-over on the economy, i.e., the ineffective methods of transformation, will be unavoidable losses. Therefore, the misgivings are justifiable, because rather than resolving a difficult situation, meat rationing will lead only to a worsening of it."

Wieslaw Worzniak

"We think that rationing should be for meat and pork products, but not for vegetable oils, lard, or butter, because people consume those products in a variety of ways. For example, older people consume less lard, but younger people and families with children need more. Therefore, each person should be able to buy those products according to his or her own needs. As an example, many people do not like butter, so why should they have rationing coupons for butter, when they would prefer to buy other fats. After all, each person has the right to buy whatever he or she needs. We should not force anyone to eat something simply because he has a rationing coupon for it. As has been stated, meat and cured-meat products should be rationed, but only in equal amounts for persons living in the cities and in the country. Farmers must eat meat in order to have the necessary strength for heavy farm work."

Farmers from Podlasie

"With regards to meat rationing, I propose the following points:

"1. Analogous to the situation among persons working physically in the socialized economy, allocate 4 kg of meat and meat products to adult members of farm families using more than 2 hectares of land for agriculture;

"2. Assign to rural children and teenagers amounts of meat equal to those of their urban counterparts;

"3. Completely eliminate open-market sales, i.e., the farmers' surplus production of meats and lard;

"4. Grant rationing coupons for meat, lard, and sugar by name, and distribute them on a quarterly basis, if not in the entire country, at least in one province.

"I base the above points on the following:

"The artificial reduction of meat and lard allotments discriminates against rural people. Indeed, a farmer can supplement the reduced allotments through his own production, but that is a harmful economic assumption which will preclude large amounts of meat from reaching the national supplies. Moreover, enormous losses of hides will also occur.

"Leaving the sale of meat and lard on the open market to the farmers is a dangerous way for the creation of a "black market." This in turn will lead to: continuous reduction of producers' deliveries for the national meat supplies; prices bordering on exploitation; and the wide-spread tendencies toward careerism and everyday bribery; this is foreign to our system but recently has appeared in all walks of life.

"Rationing coupons should be distributed quarterly by name, because the bimonthly ritual of their distribution and collection is nothing more than the creation of our bureaucracy which gives employment to many drones in our society.

"Keeping the purchase of meat and meat products within the confines of the gmina is in practice unacceptable, because half of the nation's people living in the rural areas does not have any network of subbranch stores in their area. Moreover, the vast majority of those people have to go at least 10 km to the gmina seat without any permanent and accommodating means of transportation."

Franciszek Wrona
Barka-Wola-Radosz
Radom Province

"Meat rationing for farmers should be conducted during the summer and eliminated during the winter, because rural women not only have more time for cooking in the winter, but also more pigs are butchered. Rationing coupons should be available in each province and valid for the entire summer period. In that way, a farmer could spend more time working rather than running around each month for a kg of meat. When a farmer inquires every day about his kg of meat, as is the case with sugar, and discovers that it is available, the store personnel may leave him only scraps and bones and save the best pieces for themselves and their family."

Franciszek Siejk
Ruskoleki Nowe
Lomza Province

"I was not very pleased to hear about the proposal to ration meat and lard. The proposal harms the farmers. The monthly allocation of one one-half kg of meat per farmer can be used only once. A four-person family will be able to eat meat only once a week. Furthermore, 3 kg of lard, which would have to last a year, now will last only a month.

"The people, who make these proposals, do not know the work difficulties and conditions of the farmer. They are guided only by the notion that farmers sell pigs, cattle, and poultry and thus are able to supply themselves. Pigs do not grow like mushrooms after a rainfall. Between 7 and 9 months of care are required before a pig may be butchered.

"Farmers with small farms can butcher their pigs at most only twice a year. What value is old meat in comparison to fresh meat? If one wants to have a good product, he must either be a butcher or pay dearly for services (2,000 zlotys per pig). Despite curing, meat spoils during the summer. Housewives use every bit of meat for fear of wasting it. The butchering of a pig for one's own use when conditions are unfavorable is a waste of much meat. Therefore, neither the farmer nor the State benefit when the farmer has to butcher a pig. The number of animals scheduled for market also dwindles considerably.

"In order to work between 12 and 16 hours a day, a farmer has to eat. He needs twice as many calories as people in other occupations. Only a miner works harder than other workers and farmers, but only half as hard as that of the farmer.

"A coal miner is privileged in his coal allotment--12 tons per year. In contrast, a farmer who produces meat is supposed to receive the smallest allotment of meat. A farmer is considered to be anyone with more than one-half hectare of land. The coal allotment for a farmer is a ton per year, although he can obtain more coal for suitable pigs--350 kg per pig. But how many pigs can a farmer raise on a farm having between one-half and 2 hectares?

"Disregarding these matters in meat rationing would become a bone of contention between the city and the country. Who will want to work on the farm as an inferior, second-class citizen?"

Jan Kosnik
Komorowo 2
07-310 Ostrow Mazowiecki

"We are farmer-workers and agree totally with the consensus that the current situation in Poland is bad. Farmer-workers and farmers, however, did not lead us into this situation; it is the fault of those who unfortunately governed us. I do not eat meat all week, because even if it is available, my salary is insufficient to buy it. If I eat meat at all, it's only on Sunday. But with regards to lard, think it over seriously, because unfortunately it is used for everything! Why is the farmer-worker being so humiliated? After all, he probably works the more hours per day than anyone. When he has some urgent work to do in the fields, he gets home quickly by train or bus, grabs a sandwich, and rushes off to the fields. If lard is going to be rationed, what is he supposed to use at home and spread on his sandwich at work?"

Farm woman from Rzeszow

9807
CSO: 2600

POLAND

REASONS FOR FISH SHORTAGE PR

Warsaw DZIENNIK LUDOWY in Polish 23 Dec 80 p 4

[Article by Hanna Bilski: "Why Are the Fish Spoiling"]

[Text] While thinking about traditional Christmas eve carp, a question comes back this year like a boomerang: why is it so difficult to get fish for the Christmas table? Why in general is there such a shortage of fish in our stores? A few years ago when a government program appeared on the expansion of production of fresh-water fish, in accordance with its assumptions for 1980, the planned haul of fish in nets was to be 45,000 tons. However, not only has progress not been made--quite the contrary--a significant decline in production occurred. For example, of a planned 28,000 tons of carp, there will be in all of Poland's stores only... 8,500 tons.

The attempted explanation for the shortfall was the very bad weather; it is known that under low temperatures fish grow more slowly. However, this is only half of the truth. The problem begins much earlier--in stocking the breeding ponds. First of all it often happens that the young fish are not healthy, but sick due to an improper, monotonous diet; not only are the fish of poor quality, but the fish breeding establishments have a significant shortage. Large losses in the stocking of the young fish occur due to poor conditions in the ponds.

A correctly managed fish pond demands a large amount of manual work. Ponds have to be cleaned, fertilized, and periodically thinned to prevent excessive crowding of the fish that lessens the amount of oxygen and nutrients in the pond. There, machinery will not replace human hands. But there is a lack of willingness to do this job, because it is hard, ungratifying, and low-paid. In addition, there is a lack of funds for systematically taking these measures. The control of NIK [Supreme Chamber of Control] has shown, for example, that one third of the surveyed ponds were not fertilized at all. If it happens then (and it did happen) that all of these negative factors occur simultaneously, and fishing nets will obviously remain empty.

Yet for additional reasons the "absence of fish" threatens our lakes and rivers. In the case of the lakes there has been a continuous decline in stocking them with high quality fish and in regularly catching the fish. The reasons are like those above. But here we encounter an additional factor of increasing importance: pollution of the environment. One heavy discharge of a factory's sewage is enough to kill aquatic biological life for many months or years.

Reasons for the decline in the production of fresh-water fish stem heavily from poor organization. Existing until 1975, the Association of State Fish-Breeding Establishments [ZPGR] guaranteed coordinated action for fish production and dealt simultaneously with technically proper pond management, renovation, fertilization, selection of young fish, planned stocking, hauling fish in nets, etc. But in 1975, ZPGR was eliminated, and fish management was subordinated to the State Associations for Enterprises of the Agricultural Economy. But since these associations are accountable for primarily agricultural products, the fishing industry was of least interest to them. We see today the effects of such reorganization in the stores when there are no more carp and breams, and there is no single, centrally managed, specialized organization for the national production of fresh-water fish.

Our market also experiences a shortage of fresh salt-water fish. There is a shortage of such previously common varieties, such as sprats, flounder and salted herring. And the Baltic Sea has not all of a sudden become a dead sea, and if there are fewer fish now, then there is all the more need for wiser fish management; we also have fairly abundant fishing grounds outside of Poland. And in the case of shortages on the market, we blame poor organization and a certain incapacity to act.

Theoretically we have everything we need to ensure the arrival of fresh fish directly to the consumer, but it appears in practice that we have nothing. Port storerooms and coolers, in which the fish are temporarily stored before being dispatched to various parts of Poland, have a shortage of space, and in the case of more abundant fish catches they need to be "managed" in some way to prevent them from spoiling. Also all around the world fish are transported by train, because fish are cheap; therefore, there is no reason to pay a lot for their transport. However, our railroads lack refrigerated cars, because the country does not produce them. In addition freight trains go slowly, and fish have to be transported very quickly. It is impossible to attach refrigerated cars to the passenger cars simply because their speed limit is not suitable for passenger trains. What remains then are refrigerated trucks, but there are only a few, and also their utilization is far too expensive to use them for fish.

Another problem is the network of stores dealing with the fish trade. There are but a few specialized agencies under the leadership of the "Fish Center" in Poland, and their placement in the area of each province is not even. It is rarely possible to buy fish except in large voivaodship cities, to say nothing about the villages. Common grocery stores do not want to sell this quickly spoiling product, because usually they lack cold storage plants. Their plan for selling fish is fulfilled mainly during the Christmas period when the demand significantly exceeds the supply.

It might seem that, in the case of salt-water fish, the biggest problem is due to a shortage of cold storage plants at every stage of their way from the sea to the consumer. But there are also other problems of an organizational nature. It so happens, that the problem begins right after pulling in the nets. Pressure is exerted on the fishermen by the plans for catching fish, and they want to fulfill these plans. Thus it happens that fish examined at the fishing grounds (such is the responsibility) and considered to be too tainted are nevertheless sent to Poland. There at the port they are examined once again, but without even waiting for the results, the whole shipment is sent to the "Fish Center." Later, when the statement documented by the Health Authority arrives, the receiver of the ill-fated shipment is left with no other choice than to send the fish for processing or just to discard them. Also typical is the fact that my interlocutor who gave me this example stipulated that he remain unidentified. Meanwhile, if we want to reach the point where stores offer a wider variety of fish than frozen cod or smoked carangid, it is necessary not only to point out all of the shortages and absurdities of our economy, but also to counteract them effectively.

Even though not all of the troubles with which our fishing industry has to cope were mentioned here, just showing so many "bottlenecks" and organizational failings, explains clearly why our fish menu is so poor.

9818
CSO: 2600

ROLE OF SCHOOL IN IMPLEMENTING NEW ECONOMIC MECHANISM

Bucharest SCINTEIA in Romanian 13 Feb 81 pp 1, 3

[Article by N. N. Constantinescu]

[Text] We are living in an age where the problem of the economical and efficient use of human, material and financial resources has taken on an unprecedented urgency. We should not forget that the needs of production and nonproduction consumption are increasing steadily and that satisfying some of them gives rise to others and that, in each period, with resources having an objectively determining size, the opportunities for satisfying growing needs depend on the efficiency with which the resources are expended. The correct administration of resources, thus, is a basic principle of economic progress, while the importance of it grows each day. For that reason, implanting this principle in modern man's way of thinking, even from the time he is a child, is a basic duty of the school.

Socialist society places resources and economic development at the service of all its members, while worker self-leadership based on economic self-administration makes each a participant,against the background of the united democratic leadership of the national economy as a whole, in the big job of the responsible management of the efficient leadership resources of economic-social life. Through this very job, socialist democratism opens new horizons for demonstration of the creative personality of all who work.

As we know, the essence of the new economic-financial mechanism promoted by the party is solution to the central problem of our economy: the need for a powerful growth in economic efficiency toward further systematically raising the material and spiritual standard of living of all the population. For that reason, worker self-leadership and the economic self-management of the units mean a deep revolutionization of the way of thinking and solving problems by all participants in the economic process. In order to participate effectively in management of resources the desire and enthusiasm are not enough, but also a solid knowledge is needed in order to discover and understand the economic problems rapidly and with appropriate depth, to find realistic and the best solutions and to take action appropriately. Of course, along with the mastery and broadening of the horizons of one's own profession, this means that the working man should also have a satisfactory minimum of economic knowledge, without which he risks remaining at the surface of things, not being able to have active economic thinking and a clear and prompt initiative which utilizes the sense of total responsibility.

The question being asked is whether our secondary and high school education is doing enough to prepare the young people in the spirit of a modern socialist manager required by the new economic-financial mechanism. Objectively, we must admit that, although there are many achievements, there still is a lot to do to form in the school children, the future participants in the job of worker self-leadership and economic self-management based on efficiency, an active and modern way of economic thinking based on competence, on a correct knowledge of economic realities and of the economic mechanism, on the initiative and courage in researching the problems and seeking effective solutions, on an open combative spirit against incompetence, bureaucratic rigidity and escaping of responsibility, against the wasting of resources and slipshod work and production which do not correspond to social need.

Against this general background, a substantial improvement is required in teaching the economic subjects in school--economic knowledge, political economics, planning, statistics, accounting and so forth--as well as law and linking them more solidly with the problems and realities of the economic units. In this regard, it is a primary demand to group all the cadres teaching the economic subjects, political economics, planning, statistics, units' economics and so forth within a a joint economic collective by school, capable of providing the cooperation, actual coordination of all the particular professors in the action to raise the efficiency of the pupils' theoretical and practical training in accordance with the requirements of the new economic-financial mechanism. And this means not only that the teaching should be accompanied by illustrations but also should have the necessary view and should be anchored in practice. In addition, production practice itself should not be limited merely to its technical part but the professor of economic knowledge and of political economics and other professors of economic subjects should themselves lead and guide the pupils along the economic aspect of this practice in the direction of achieving an analysis of labor productivity, costs, profitability and so forth. Unfortunately, it is precisely this aspect of practice which now is lacking nearly everywhere and it is not just once that the lack of it has been noted even by the pupils. For example, at the national pupils' scientific conference in the summer of 1980 in Sibiu, two pupils enthusiastic and wishing to do something useful, hoping to increase labor productivity in the school workshop, related that they had not received the proper help from the professor of political economics, since he had another specialty and other professors did not give them help either, except for the foreman. The school workshop as well as the practice bases, through their excellence are a favorable field for having the pupils form an enterprising spirit of action with active economic thinking based on the seeking of efficiency. An insufficient link of teaching the economic subjects with the concepts of political economic and real economic life in the field and the failure of the pupil to learn how to utilize the particular knowledge and concepts in practice can only mean placing the emphasis on memory and not on the development of thought and conviction, which lead to a lack of efficient teaching. For that reason, matters require a completely substantial progress. We feel that the local party organs also have something to say in this regard.

But all this is only one aspect of the problem. Another is having the pupil learn, from the positions of practical efficient action, what precisely worker self-leadership of the units consists of in the context of the united democratic leadership of the national economy as a whole, what are the minimum means for a realistic analysis of the problems in the discussion and solution of which workers participate in a unit and how they can use them; how the plan of one unit actually is worked out, what are its elements and goals and how you have to prepare yourself to have the workers discuss in a general meeting a draft plan or to make an analysis of a report regarding fulfillment of it; what are the basic principles of the scientific organization of production and work and how their application can be extended and improved on the example of certain real enterprises or jobs; what are the means for establishing the real efficiency of the introduction of new technology and the enormous importance of this; what are the negative implications of pseudo-profitability or of inappropriate quality of products for the national economy and, in the end, for the standard of living; what does worker control actually consist of and how is it exercised and so forth.

All these show that there is a need for rethinking the teaching of economic subjects as well as law in the school, both with regard to the problems approached as well as, I would say in particular, with regard to the way the subjects being taught are conceived in order to better answer the tasks which inevitably are given to the school by the new economic-financial mechanism.

But not only secondary and high school education have increased tasks in training new cadres in light of the new economic-financial mechanism, but higher education, too. As we know, the saving or waste of resources--to give an example--is to a great extent still determined from the planning stage. A machine or an installation which has been designed inefficiently from an economic viewpoint does not represent merely a failure for the producer but, through its exaggerated consumptions of raw materials, energy and fuels or through the poor quality of the products or many technological rejects, throughout its entire operation is a source of appreciable losses for the national economy. Why then are we not giving more attention to the economic training of students in our technical faculties? And not only theoretical economic training but also the practical training of the student engineers should be improved. For example it would be of great use if their technical practice in production would also include, parallel, a number of basic economic aspects--the organization of production and work, labor productivity, analysis of production costs, efficiency of the newly introduced technology and so forth. For example, we know that many of the superior results obtained by a number of American plants compared with West European ones is based not so much on a higher technology but on a better and more economical organization of the production process and of work.

Undoubtedly the new economic-financial mechanism places increased tasks on the training of new cadres of economists. This is especially since the new economic mechanism based on efficiency objectively leads to a gradual increase in the role which the economist must play in the economic units. As a result, the economic faculties have the duty to raise even more the level of training of the young cadres and to supply them with a more demanding theoretical and practical training, with a modern and diversified tool of economic analysis, with a scientific ability to discover more rapidly the meaning of the economic processes and phenomena, with more imagination and courage in the analysis of problems and the timely discussion and solution of them, with a greater force of conviction and mobilization of the collectives where they will work to reduce costs and raise the quality of products, steady rate of production and better anchoring of it in the actual requirements of the domestic and foreign market and the prevention of useless expenses and waste and the rise in real profitability. This means that the economic unit is to be explained to students not merely by aspects and pieces but as a living economic organism with its internal and external interdependencies which must react promptly and efficiently to the demands of the national economy and international market. And in the case of this learning, the link with practical life must be basically improved. It is not enough for the students to go into practice; it must be carried out efficiently; in addition, practice must be brought to the courses, seminars and laboratories. But this is not as a narrow practicism without horizons but as a clear examination from the scientific viewpoint of practice, promoting the progressive and efficient newness from it and combatting routine and rigidity when they exist. At this time the fact also should not be forgotten that a good theory, linked with life, is the most practical thing.

Returning to the problem of resources and recalling that in the end the most precious resource of man and society is time and that the saving of time is in itself the substance and measure of economic efficiency, we cannot help but ask why our school is not teaching the child, the young person regularly--and perhaps even the adults--how to usefully save time and not waste it. Even Marx said that the planned saving of time must be the first economic law of socialism.

Thus, schools have the great mission of teaching all of us that the level of development of a society as well as the level of the individual are reflected best in the attitude toward time.

8071
CSO: 2700

MACHINE BUILDING MINISTER STRESSES MODERNIZATION, ECONOMY

Bucharest SCINTEIA in Romanian 18 Feb 81 pp 1, 5

[Interview with Ion Avram, minister of the machine building industry, by Corneliu Carlan]

[Text] [Question] To begin with, Comrade Minister, will you please sum up the qualitative features characterizing machine building activity in the last five-year plan?

[Answer] The last five-year plan was an important stage in the implementation of the program to build the fully developed socialisy society in Romania and a period of fruitful achievements for the machine builders. All they accomplished in that period is due to Nicolae Ceausescu's direct and unremitting effort toward dynamic development and further modernisation of production in this basic industrial sector essential to technical progress throughout the entire economy, and toward constant improvement of our economic activity. Enhancement of machine building's contribution to regular growth of the national wealth is a major qualitative feature of the sector's activity. In 1980 machine building's share in the national industrial output came to 34 percent and its net output accounted for 40 percent of industry's contribution to the national income. Its labor productivity showed an average annual growth rate 23 percent higher than that of all industry. We supply nearly 80 percent of the requirement for industrial equipment for investment projects, a large volume of consumer goods for the public, and over one-fourth of the nation's exports.

The peak subsectors promoting technical progress showed higher growth rates. For example, last year the output of the electronics industry was 2.2 times greater than in 1975, that of optical and precision machinery was 2.3 times greater, that of machine tools for cutting metals was 2.3 times greater, and that of manufacturing equipment was 1.8 times greater. Supply of the domestic requirement with machine building products steadily increased, reaching 100 percent in power equipment and railroad transport means, 97 percent in computing equipment, and 90 percent in telephone equipment. Moreover activity in the last five-year plan branched out into new production sectors such as aviation, microelectronics, equipment for nuclear-electric power stations, etc. Those are essential qualitative factors basic to our further commitment to a more regular technical effort that will directly contribute to more intensive modernization of our sector's production structure and to the proper performance of its recisive role in the technical equipment of the national economy.

/Question/ In the 1976-1980 period the machine building industry did not completely fulfill a number of tasks to reduce consumption of metal, fuel and energy. What are you doing to reduce the material inputs this year by at least the planned amounts?

/Answer/ On the whole we concluded the last five-year plan with good results, but I must say that some enterprises showed certain failures in achieving the physical and net outputs. The consumption norms for metal as well as energy and fuels were unjustifiably exceeded in some enterprises. A number of measures have been taken for 1981 in the ministry, centrals and enterprises to ensure strict conformance to the list of standardized materials and especially to the consumption norms for metal, energy and fuel. For instance, in the 220 and more enterprises under our ministry and primarily in the sectors that failed to conform to the consumption norms last year, special emphasis has been placed upon the technical efforts toward more regular improvement of the index for metal exploitation, complete recovery of reusable material and energy resources, and their return to the productive cycle. A simple calculation shows that a 1 percent increase in the metal exploitation index in 1981 saves nearly 53,000 tons of metal, which metal is obtained by consuming large quantities of coke, ore, ferrous alloys and energy. Note that these raw materials are largely imported. In other words, 16,000 tractors or 48,000 town passenger cars or 1 million refrigerators could be manufactured with the metal saved. Therefore it is planned to increase the assortment of products making better use of the metal in 1981, with regular comparison of our efforts with the peak achievements throughout the world?

/Question/ How will these efforts be rewarded?

/Answer/ Although the sector's net industrial output is to be up 12 percent this year, metal consumption will be the same as in 1980. In other words, every million lei in output will have to be produced with 2 tons less metal than last year. Maintaining a steady pace in the manufacturing process is vital to obtaining the expected economic effectiveness, and as it was indicated at the recent session of the Political Executive Committee of the RCP Central Committee, adequate provision for the material base is the decisive factor. To this end the ministry's administration had all programs for design, assimilation and approval of imported materials, products and subassemblies reanalyzed and also asked the ministries of metallurgy, chemistry, light industry, and forestry economy and construction materials to expedite their assimilation. In connection with this problem I think consideration must also be given to the point that the raw materials and materials that are assimilated must be certified according to international standards, because over one-third of the output of the machine building industry is intended for export. Moreover our request is not only justified but also quite feasible in view of the high standard of technical equipment of the national economy. The experience acquired in production of bearings, for example, demonstrates the high efficiency of international certification of the quality of materials and parts that we make. In this connection, we intend to enhance the reliability of our products so that they will perform the functions for which they were designed under highly competitive conditions.

But to return to the requirement for reduced consumption, I should like to discuss a few measures that we think will be very effective in conserving some scarce material and energy resources. Specifically, we shall introduce new metallurgical technologies in the hot sectors and improve the existing ones by considerably reducing the inputs of ferrous alloys. And as regards fuel and energy consumption, we shall have to implement the plan with practically the same quantity of energy resources as in 1980. Therefore we are reviewing and setting norms more strictly for energy and fuel consumption, especially in the primary sectors, where we use over 80 percent of their total. We are accordingly expediting measures to modernize the furnaces by equipping them with regenerators and measurement and control devices. We shall also save over 191,000 tons of conventional fuel this year through use of secondary resources. Also to conserve energy, we are taking steps for better organization of operations in the heat-treatment and painting sections through better scheduling of their workloads to shorten the time of preparing the charges in foundries.

[Question] It is well known that renovation and modernization of production are very important for enhancing the competitive power of the products and the degree of exploitation of the raw materials and energy. What are you doing to implement the programs for these purposes accurately?

[Answer] First, we shall continue priority development of some peak subsectors that have become vital to the Romanian economy and are making the most intensive use of metal and processed raw materials. We are emphasizing development of technological systems for the best exploitation of the raw material resources, such as power engineering based on solid fuel, hydraulic engineering and nuclear power engineering. Another important task the party administration has assigned us is the immediate manufacture of a number of multipurpose, highly productive agricultural machines for both level and sloping lands. We shall also diversify the assortment of consumer goods, with a 23 percent in their production this year from 1980. Furthermore we shall complete our mechanization and automation programs and considerably increase the proportions of electronics, microelectronics and automated and hydropneumatic equipment in the total machine building output.

Throughout our effort to renovate and modernize the products and to further reduce consumption of materials and energy, we shall resolutely follow the directions given by Nicolae Ceausescu during his working visits to machine building units this year and at the general assembly of workers in the Bucharest 23 August Enterprise, which directions are highly important for raising the work of the collectives in our sector to a higher qualitative level.

[Question] Recently, in analyzing the state of the program to standardize industrial products, Nicolae Ceausescu again pointed out the necessity of intensifying standardization so that the list of standardized products will meet the requirements of the national economy with the greatest efficiency for both the producer and the beneficiary. What specifically are you going to do?

[Answer] I must say that Nicolae Ceausescu gave a number of directions applying to our sector when he analyzed the standardization effort. The collectives of machine building specialists are intensifying the standardization effort in the light of these directions, emphasizing formulation of the basic structure of the system of machinery and equipment while making it possible to rationalize design and production operations and to intensify standardization of the processes of manufacture and specialized production of assemblies, subassemblies and components. So far we have found that standardization enables us to reduce the number of varieties and standard sizes by 77 percent of the total of those analyzed. Since the standardization program has shifted some varieties scheduled for import to those that will be domestically manufactured, the collectives of specialists will make a special effort to rationalize the number of standard sizes in the groups of products originally designated for import. As a conclusion, this broad standardization program will bring about an extensive exploitation of the technical potential we have in our units, more directly correlating research and design with the production tasks, with the program for renovating manufacture and technologies, with their approval, and with manufacture through microproduction of a greater volume of materials and subassemblies that used to be imported.

[Question] In several of his speeches Party Secretary General Nicolae Ceausescu assigned the machine building industry very important tasks to enhance its contribution to Romania's balance of foreign payments. How are you trying to increase exports?

[Answer] Our main task, on which the substantiation of the ministry's physical and value plans is based, is in connection with the machine building industry's participation in the nation's favorable balance of foreign payments. I must say that in general the high technical standard of this sector's products is making them more and more competitive on more and more foreign markets, and a 35 percent increase in machine building exports is planned for this year. For that purpose, the main objective is to contract immediately for the export commodity supply. We have instituted measures to expedite this effort in every industrial central, to promote long-term contracts, and for the consistent participation of machine building in the efforts to compensate for the imports. Meanwhile we are diversifying the list of export products and especially those with a high content of added value, along with improvement of quality in all stages of the production process and strict observance of delivery dates and the requirements for spare parts, all of which will greatly enhance the effectiveness of export operations. The new qualitative standards for foreign trade activity emphasize prospecting and better knowledge of the foreign market's possibilites of absorption, commitment of deliveries of machines and equipment to chemical, metallurgical, power and mining complexes, and cooperative production of some assembly lines. We also intend to make a number of organizational improvements in connection with the enterprises' direct participation in the international auctions as well as improvements in the activity of general suppliers of complete installations for export and in services, technical aid and supply of spare parts.

We are fully confident that we have all the prerequisites for practical application of the new economic mechanism, and we again assure the party administration and Nicolae Ceausescu in person that the million and more workers in the machine building industry are determined to carry out their tasks in this basic year of the five-year plan of quality and effectiveness.

5186
CSO: 2700

ROMANIA

AGRICULTURE MINISTER DISCUSSES RECENT PROBLEMS, FUTURE PLANS

Bucharest ROMANIA LIBERA in Romanian 13, 14 Feb 81

[Interview of Angelo Miculescu, deputy prime minister of the government and minister of agriculture and the food industry, by Stefan Zidarita and Eugen Sasu, place and date unknown: "Agriculture in a Broad Effort towards a New, Higher Quality"]

[13 Feb 81, pp 1, 3]

[Text] [Question] The working session dealing with agricultural problems, held in Brasov, was the first meeting this year at the level of the party leadership. This event brought to the attention of the country the considerable significance that will be given during the current five year plan to this basic branch of the national economy. We ask you, comrade deputy prime minister, that before discussing the agricultural revolution that the party is leading us to, that you tell us about the point from which we are starting. In other words, tell us about the achievements in agricultural during the five year plan that we have just completed.

[Answer] True, it is the first working session in this five year plan, but, in fact, it expresses an unanimously noted continuation and a revolutionary, democratic style of work. As is known, it has become a tradition in the activities of the party leadership and the secretary general, comrade Nicolae Ceausescu, to periodically consult with workers on the fundamental problems of the development of the national economy and the overall Romanian society. In the wake of these consultations, there have always been, especially during the last three five year plans, among the most efficient actions and measures. Within this context, we can also count the working session at Brasov, to which those of us working in agriculture gave special significance. Actually speaking, this session, a veritable political and professional conference, constitutes a starting point in achieving the tasks given to agriculture by the 12th Party Congress for the first half of this decade. I called it a "starting point" and I did not at all exaggerate because in this five year plan we are called upon to achieve a true revolution in agriculture. One very important for us. For the national economy. This is how the broad discussion at Brasov must be understood. The development of one of the principal branches, industry and agriculture, was never and must not be considered as an exclusive task. And it cannot become one. Agriculture is, at least in some fields, the main source for the development of industry. And vice versa. Industry plays a decisive role in the development of agriculture.

[Question] The reciprocity is truly evident.

[Answer] Let's return to the first question. The point from which we are starting in this five year plan. We cannot begin in any way other than by showing the broad development of the technical-material base of agriculture. Well, in the five year plan that just concluded, large, very large steps were taken forward. In the direction of consolidating and modernizing this base to which I referred. Thus, it was possible to introduce and spread advanced technologies both for plant production and for zootechnical production. Specifically, in 1980, agriculture had 146,500 tractors and 39,100 self-propelled combines. This means that plowing, seeding and harvesting for grains could be accomplished mechanically and, therefore, completed on time. Similarly, the surface area under irrigation increased by over 890,000 hectares, today totalling 2.3 million irrigated hectares. In the area of chemicals use, it is worth noting that the average annual amount of chemical fertilizers during the last five year plan was 112 kg per hectare on arable land, compared to 77 kg during the 1971-1975 five year plan. On this basis, it was possible to substantially increase plant and animal production, an increase that I can point out through some solid data: the average annual production of cereal grains (for the 1976-1980 five year plan) was over 19.3 million tons, or approximately 4.6 million tons larger than during the previous five year plan. I can also mention sugar beets: 1.37 million tons. Fall potatoes: 1.03 million tons. As you can see, considerable increases.

[Question] And capable of being obtained only in socialist agriculture.

[Answer] Later, we will also discuss non-fulfillment. Right now, however, we will continue with what we achieved, clearly, in honor of those citizens working in agriculture. In referring to the increase in the number of animals in animal production, increases especially took place in socialist agricultural units, where there was a considerable extension of the industrial raising system in zootechnical complexes. Although the increases in the numbers of animals took place at a slower rate, animal production during the five year plan was, nonetheless, greater by 500,000 tons of meat, 10.3 million hectoliters of cow's milk, 4.8 thousand tons of wool and approximately 1,920 million eggs, compared to the 1971-1975 five year plan. Even though the plan was not fulfilled for some crops and types of animals, overall for agriculture in its multiple sectors the production for the years 1976 to 1980 was 26.4 percent greater. Using the same framework of comparison - the previous five year plan. This means an annual rate of growth of 4.6 percent. With regards to the organization of production and work in agriculture, let us not forget the improvements made. I am referring to the creation of the unified agroindustrial councils, an action designed to put to better use the potential of our socialist agriculture. First of all, by the judicious use of the land and mechanized equipment - an absolutely solid base - and the workforce. This process is being carried out now and during this five year plan it will become, as the party leadership is requesting of us, a powerful key in the growth of agricultural production and the efficiency of all our activities.

[Question] The successes are, truly, great and incontestable. There was also some non-fulfillment. Some were due to unfavorable weather, others because of us, the workers. What was this non-fulfillment? What is your opinion regarding this problem?

[Answer] Without a doubt, in addition to the negative influences brought on by climatic conditions that were less than favorable, we can also add to the causes for non-fulfillment in this branch certain deficiencies in our activities and those of agricultural units, especially with regards to the use of the solid technical-material base to which I referred to earlier, as well as in the on-time completion of all projects. If these shortcomings had not occurred, I can state that the harvest reaching the storage areas would have been substantially larger.

[Question] Specifically, what would it have meant if all the projects had been completed during the optimum timeframes, and if all tractors and agricultural machinery had been used intensively? The evaluation made by the secretary general of our party at the session in Brasov is fresh in our minds. We are referring to at least two important projects, namely planting and harvesting the crops.

[Answer] The delays in these projects bring about serious losses for the economy. As the analyses undertaken at Brasov show, frequently 10 to 15 percent of the harvest production is lost, not to mention the losses at the beginning, that is during planting. Here we must concentrate our efforts, and not just the ministry, but all those who work in agriculture. A technical-material base exists, and it will be quantitatively and qualitatively improved during this five year plan, but, nonetheless, in the fall of 1980 the corn harvest took much too long. A significant area has remained unplowed, which will mean that this spring a series of tractors will have to be involved in plowing instead of being used to prepare the land for planting. This means, therefore, that right now the county agricultural organs and the specialists in the units will have to take measures so that every hour of work will be used by all tractors. The projects of the spring agricultural campaign this year constitute the first test in the five year plan for all those who work in fields. I have reasons to believe that all cooperatists, equipment operators, workers in the state agricultural sector and specialists and leadership cadre in the units will make every effort to achieve during this five year plan a qualitative leap that will be reflected in work discipline, in the quality of agricultural work and in the carrying out of these things within the framework of optimum timeframes, concomitantly with the concern to reduce the consumption of fuels, lubricants, spare parts and energy. In the final analysis, all this will bring about the achievement of certain larger harvests having lower production costs, meaning, in fact, a marketplace better supplied with fresh or processing agro-food products.

[Question] Let us return to the large problems of the present. We are talking about a revolution in agriculture. What are the major points of this new, higher quality in Romanian agriculture?

[Answer] In order to better understand the problem, I will point out three of these points that are truly essential. The first refers to man. To his professional and civic awareness. Like any revolution, the revolution in agriculture must be based on the conscious actions of the people and on the understanding of the requirements of progress for the country. The second point deals with the full use of the agricultural land, regardless of who works it and where it is. Finally, the third - the efficient use of the entire technical-material base so that the production records set by the top units will become current harvests in all the agricultural production cooperatives and the state agricultural enterprises.

Let us summarize. We have good people, people close to the land, with a passion for farming. Similarly, we have good land. The supply of equipment to agriculture is noticeably increasing from year-to-year. Thus, all the conditions exist to achieve this new, higher quality in the agriculture of the country. During the current five year plan, investments have been allocated to this sector totalling 155 billion lei. We will direct these funds in the priority directions of modernizing agriculture. I am referring to continuing to supply tractors of different types and power and improved agricultural machinery that will ensure the extension of mechanized work in viticulture, fruit growing, vegetable growing, the zootechnical sector and everywhere.

[Question] How will these large amounts of investments funds be used?

[Answer] New zootechnical complexes will be built in which, as we have stated, work will be mechanized and even automated, and where there will be substantial increase in labor productivity in this sector. Similarly, we have in mind an important volume of work in land improvement (irrigation, draining, combating soil erosion) that will lead to the growth in the production potential of the land. Do not forget, however, that the improvement of techniques and technologies obligatorily means raising the level of the professional training of all the workers in agriculture. Here is where we have our attention, much more concentrated from now on, for the formation of certain agricultural workers having a multilateral training, having the passion of the industrial worker and having their discipline. The organizational framework created by the established of unified state and cooperatist agroindustrial councils ensures favorable conditions for the organization of crop rotation and the extension of intensive farming in fruit growing and viticulture, and for the creation of certain new complexes for the raising and fattening of animals through association and cooperation between units, on the basis of which we will obtain continuing increases in production and, appropriately, in the incomes of the agricultural units.

[Question] It is said that agriculture is ever more becoming an industry of the land. How and in what ways can we truly make it an industry of the land? What systems, methods and advances from industry should be more decisively taken over to agriculture?

[Answer] Yes, actually agriculture has become an industry of the land. Today, when an agricultural worker can drive up to 180 hp tractors, or even more powerful ones, and harvest combines (the C-12 combine is capable of harvesting approximately 25 crops), we can state that agriculture is becoming an industrial branch. I think that there are many common points between a modern pig raising complex or fowl raising complex, where workers care for 1,500-18,000 fowl or 1,500 pigs, and an industrial unit.

For that reason, I feel that a basic element of the "industry of the land" is mechanization, whose extension will permit, in 1985, a reduction in the percentage of the labor force employed in agriculture to 22 percent of the total labor force employed, and in 1990 to only 15 percent. This presupposes a substantial increase in labor productivity, a basic element of a modern agriculture. In addition to mechanization, there is the use of chemicals in agriculture. In the fertilization of the land and the combating of damaging elements, the use of chemicals ensures important increases in production by putting into use the productive capacities of agricultural plant types and hybrids, on one hand, and by reducing to a minimum those losses caused by diseases and pests, on the other hand. It is understood that we are giving special attention to the use of the full quantities of the natural fertilizers which are the most valuable and always the most efficient from an economic point of view. We have large quantities which, unfortunately, in some units stand unused for years, while the units wait for chemical fertilizers. Finally, I would mention another equally important element, irrigation, which removes from the whims of the weather important areas of agricultural land and substantially contributes to increasing harvests and ensuring their consistency.

With regards to using certain methods and advances from industry, as I have shown, we have taken mechanization and, in some cases, automation, as in, for example, fowl and pig raising complexes. Today, it is no longer the case of taking these advances, but of extending certain industrial methods to agricultural production. And, we must spread and firmly implant labor discipline. When we succeed so that all the workers in fruit growing, viticulture or even field crops and all agriculture can be qualified in their speciality, according to the type of unit where they work and correctly and on-time carry out all their tasks on their jobs, we will be able to also say from this point of view that agriculture has become an industry. In this field, schooling plays an important role, where we have to ensure not only the training of the young people, but also their training through work for work. The agronomist-machine operator, the horticulturist-machine operator and the zootechnician-machine operator must be fond of the craft he has selected and must dedicate his full capacity for work and creativity.

[Part two of this discussion will be published in a future issue]

[14 Feb 81, pp 1, 3]

[Text] [Question] Comrade deputy prime minister, we have discussed the achievements of agriculture during the previous five year plan and especially the points of the agricultural revolution, towards which we are being directed by the party during the current five year plan. Allow us to ask another question. What help does your ministry expect from the other ministries?

[Answer] A logical and necessary question. Activities in agriculture, regardless of the region, are closely tied to the activities in many production sectors of industry, and especially the machine building industry and the chemical industry. As is also normal, cooperation between the ministries is certainly reflected in the increase in agricultural production and in the positive solution of certain problems in agriculture regarding mechanization and the use of chemicals. The machine building industry provides our tractors, agricultural machinery and a portion of the equipment we need. The cooperation to date has been fruitful. I hope that in the future it will be the same. In other words, the delivery of machinery and equipment will be achieved in accordance with the established programs. I would make an appeal with regards to the quality of certain machinery and equipment or, better stated, of certain subassemblies that are easily broken, creating stoppages in production which lead to delays in carrying out agricultural work. Similarly, a special problem for agriculture is the supply of spare parts for tractors and agricultural machinery. Naturally, we also have tasks in this regard. I am referring to the making of certain better equipment that is more functional in the mechanical plants that belong to the ministry. The same is also valid for spare parts, to which it should be added that it is necessary to have a more substantial effort in the direction of reconditioning certain parts and of maintaining and appropriately using all the mechanical means we have available.

With regards to the chemical industry, from which we receive chemical fertilizers and pesticides, medicines and other substances necessary to the veterinary sector, I want to believe that there will be a more accentuated concern for the diversification of varieties, the improvement of their quality and the growth of their efficiency. For example, the increase in the concentration of chemical fertilizers leads to substantial reductions in transportation costs and the costs for spreading them over the fields as a result of reducing the volume and weight of the fertilizers. On the other hand, the diversification of the production of pesticides and medicines would allow us to reduce hard currency expenditures and even stop imports. These are only several areas of interest of agriculture that will find a response both in the machine building industry and the chemical industry.

[Question] Naturally, when we speak of our agriculture now we are thinking, first of all, of the large state and cooperative units which, in fact, represent agriculture. And it is also natural for us to first discuss their problems since they achieve the agricultural production.

[Answer] Perfectly true. The state and cooperative sectors represent approximately 92 percent of the agricultural land, and are, therefore, the ones that provide to the largest degree the necessary amounts for public consumption and the raw materials for industry. Thus understanding things, we must here concentrate our attention to improve activities. Certainly, we cannot neglect the other sources for increasing the amount of agro-food products, such as the regions that are not cooperativized and the farms belonging to the people. Therefore, as we say, in big agriculture it is necessary to intervene in the sense of certain decisive measures for the purpose of introducing, first of all, order and discipline. I began with this aspect because, along with establishing order and discipline like that in industry, we will have the guarantee of carrying out on a timely basis all projects, the intensive use of tractors and agricultural machinery, and land improvement projects and, as a result, of obtaining certain much larger harvests in field crops and in zootechny. In this regard, standards were established by decree for the carrying out of basic agricultural work on cereal crops and technical plants, standards that are obligatory for all agricultural units. That which depends upon us we will do, especially since the new organs created 2 years ago - the unified state and cooperative agroindustrial councils - have fully proven their efficiency. It remains for us to work more energetically for the maturization of these organizational forms in the sense of more fully exercising their positive influence upon the unified use of the means and forces available to agriculture. The measures taken at the working session at Brasov regarding strengthening their role and the assignment of approximately 2,200 specialists who work in nonproduction units or in the central apparatus will solve to a good degree the problems facing the socialist agricultural units.

[Question] All the land belongs to the country. Whether it is in the large state or cooperative units or in the personal use of the people in the villages. How and in what way does the private farm participate in the great efforts of the country right from this spring? How do we smooth the way for a substantial contribution?

[Answer] In addition to the socialist sector of agriculture there is, as is known, the non-cooperativized sector. Although they have a smaller land area, the peasants in this sector make a significant contribution to the achievement of agricultural production and the state fund. Similarly, cooperatist peasants have in their own personal use an important area of arable land. Our party and state leadership has established that all citizens who have agricultural lands will work it, cultivate it and raise animals with the help of the state, which will provide mechanical means, seeds and seed materials, as well as technical assistance. The organization of production on the basis of a plan in the non-cooperativized regions will also lead to an increase in agricultural production in these regions and, implicitly, to obtaining certain larger amounts of produce for the state fund. The same is true for the people's farms in those cooperativized regions. To achieve these tasks, there are great responsibilities for the county and town people's councils, which are responsible for the plan and which must ensure the full use of the land within their areas of responsibility.

[Question] During this discussion, you several times mentioned the role of the unified agroindustrial councils. What are their attributes, undoubtedly broadened after the working session at Brasov?

[Answer] Two years have passed since the establishment of the unified agroindustrial councils, a time in which good experience has been accumulated, and the results obtained confirm the current need for this organizational format. The latest party and state documents confer upon the unified agroindustrial councils greater attributes in the consistent application of our party's agrarian policy. From the beginning I would mention the task of a unified organization of the lands under the unified council into types of soils from homogeneous fields, from an agropedological point of view, and the grouping of these fields for crop rotation, creating opportunites for the more rational placement of crops and higher use of the production potential of the land. On the other hand, conditions are created to accentuate the process of concentrating agricultural production by the type and specialty of the units, as well as integrating the production and economic activities of the state agricultural and cooperative units for the purpose of more efficient use of the entire material base and workforce.

The unified agroindustrial councils also have the task of intensifying association activities between agricultural cooperatives, as well as between these farms and the state units, especially for horticultural production, in this way achieving unified sectors in the fields of fruit growing, viticulture, vegetable growing and, moreover, animal raising. The unified agroindustrial councils also have a special task, that of making a more substantial contribution to the actions of zoning production. Through a much closer cooperation with the county and central agricultural organs, zoning activities, which take into consideration not only the existing natural framework, but also the means to intensify it for the purpose of increasing efficiency and decreasing the existing regional disparities within the natural farmework, will be accelerated and completed in the shortest possible time and, as a result, we will be able to approach the real potential of our socialist agriculture. I could not say that I have covered all the tasks of the unified agroindustrial councils, but I have presented the most essential.

The recent measures adopted regarding improving the activities of the unified councils also involve the assignment of certain new agricultural specialists and the selection to leadership positions in the councils of certain well-trained cadre who are aware of the problems of agriculture, who love their profession and who know how to work with people. In this way, we will arrive at an improvement of activities, both at the level of the council and in the component units, and we will accentuate the council's central role of leadership in all the economic and social affairs in the villages.

[Question] Please refer to the place and role of 1981 in the overall activities for a new, higher quality in agriculture during this five year plan.

[Answer] For the workers in agriculture, as for all the other workers in our country, 1981 is special. It represents the opening of a new five year plan, a stage in which we will have to achieve a true agrarian revolution in the sense of substantial increases in production and labor productivity and contributing more to meeting the needs of the national economy. We permanently have in mind the directives of the secretary general of our party, comrade Nicolae Ceausescu, that "1981 will constitute the decisive year for achieving the program of increasing vegetable and animal agricultural production." Agriculture, a basic branch of the economy, is placed in this five year plan on the same coordinates with the priority areas of the economy: using supplies from indigenous raw materials and the energy problem.

All the measures regarding agriculture adopted recently for the improvement of the organizational structures and the authority of the unified agroindustrial councils require a better coordination of the workers' efforts in agriculture in order to raise all activities to the level of requirements in industry. The great step forward that must be achieved by agriculture this year is influenced, however, as I said earlier, by the establishment of firm discipline and a high spirit of responsibilty in all the workers in agriculture.

[Question] What are the "pluses" of the preparations going on now for the first spring of the current five year plan?

[Answer] I will summarize some data and information which reports on and gives a picture of the progress of the work. Repairs on tractors and agricultural machinery are approximately 80 percent completed, with the more advanced counties being Arges, Mures, Bacau, Suceava and others; those behind in repairs are Calarasi, Arad and Giurgiu counties. In addition to deficiencies of an organizational nature which have led to shortfalls, we are still encountering difficulties in the supply of spare parts, motor shafts (producer: the Codlea Mechanical Enterprise), engine blocks (producer: the Brasov Tractor Enterprise) and certain items for tractor transmissions (producer: the Bucharest "Semanatoarea" Enterprise). Measures were taken regarding the supply of seed stock and the improvement of the types of corn hybrids by increasing the percentage of extra-early and early types. A better zoning was achieved for hybrid corn throughout the country, as well as for sunflowers, soy beans and sugar beets. Currently, the transfer and delivery of seed to agricultural units and individual producers is taking place. But, county agricultural organs and the leaderships of units must carefully pursue activities so that the seeds that are to be sown during the first stage will arrive at the production units by 20 February, while those used during the second stage arrive by 1 March. I should stress the importance of organizing labor during this campaign. The large number of fall fields that must be prepared and seeded is amplified, as I have pointed out, by the need to carry out spring plowing on over one million hectares. This requires the use of tractors and equipment at maximum capacity and the complete use of each day and each hour of work. For that reason, repairs on tractors and equipment must be completed in the shortest possible time so that they can all be ready to operate from the first day they head out into the fields. At the same time, special attention will have to be given to the consumption of fuels and lubricants within the context of the current state of affairs in the world. The inapprorpiate use of tractors, the failure to use them at their maximum capacity and the incorrect running of their engines are all ways to waste fuels and lubricants. The result is, therefore, that the leaderships of the agricultural units must also keep these elements in mind, in addition to the agrotechnical rules imposed by each separate crop. I would also add: special attention should be given to the quality of the work which to a good degree influences the level of production. Personally, I am convinced that all the workers in agriculture - machinery operators, peasants, cooperatists and workers on the state agricultural enterprises, specialists and leadership cadre - will work in the spirit of the Directive-Appeal of the Political Executive Committee of the Party Central Committee which called upon the peasantry to concentrate all efforts in a spirit of order and discipline to increase agricultural, vegetable and animal production, to achieve a true revolution in agriculture and to increase the contribution to agriculture to the social-economic development of the country and raise the standard of living of the people.

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